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WISCONSIN:

ITS

GEOGRAPHY AND TOPOGRAPHY,

History, Geology, and Mineralogy:

TOGETHER WITH

BRIEF SKETCHES OF ITS ANTIQUITIES, NATURAL HISTORY, SOIL, PRODUCTIONS, POPULATION, AND GOVERNMENT.

BY I. A. LAPHAM.

SECOND EDITION, GREATLY IMPROVED.

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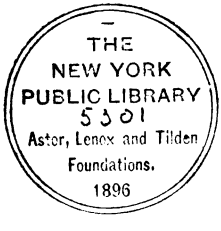

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PREFACE.

A NEW edition of this work being called for, the Author has revised it, adding such important or useful information as he has been able to collect since the publication of the first edition.

The work was originally given to the public with the hope, not only of furnishing the thousands of new comers, who are annually flocking to our Territory, and to others, in a cheap and convenient form, a large amount of useful information, which it would be difficult for them to obtain from any other source; but also to preserve for the future historian many interesting facts which might otherwise soon be forgotten and lost. The Author is fully sensible of its defects and omissions, but hopes that due allowance will be made, when it is considered that this is the first attempt of the kind relative to a country more than twice the extent of the great state of New York, which has been made public. Many parts of the country are but thinly peopled, and little communication exists between them and other settlements, so that it is difficult to ascertain what are their extent, population, improvements, &c. New settlements are commenced almost every day, and soon grow into important places without any notice being taken of them by the public. Towns and villages spring up so rapidly that one has to "keep a sharp look out" to be informed even of their names and location, to say nothing about their population, trade, buildings, &c. The building of a town has in a great degree ceased to be a matter of much interest—as much so as an earthquake formerly did in some parts of Missouri, where a traveller having stopped at a log cabin was much concerned to hear the dishes begin to rattle on the shelves, and make a disagreeable kind of music, at which the chairs and other furniture set up an unnatural and very alarming kind of dance! The good lady of the house attempted

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to allay his fears by saying, "Don't be afraid, Sir!—it's only an 'arthquake!!" Hence it may be expected that some towns are not as fully noticed in this work as their importance would seem to deserve; and others even entirely omitted.

It is proper to add here, that the Author has made free use of such publications as he could find, containing anything to suit his purpose—whether in books, magazines, or newspapers; but has been careful to admit nothing unless entitled to the fullest credit.

MILWAUKEE, May, 1846.

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WISCONSIN.

THE TERRITORY OF WISCONSIN, as established at present, is bounded as follows: commencing in the middle of Lake Michigan, in north latitude forty-two degrees and thirty minutes; thence north along the middle of the Lake, to a point opposite the main channel or entrance of Green Bay; thence through said channel and Green Bay to the mouth of the Menomonee river; thence through the middle of the main channel of said river to that head nearest the Lake of the Desert; thence in a direct line to the middle of said Lake; thence to the source of the Montreal river; thence through the middle of the main channel of that river to its mouth; thence with a direct line across Lake Superior to where the Territorial line of the United States last touches said lake northwest; thence along said Territorial line to a point due north of the head waters or source of the Mississippi river, in longitude ninety degrees and two minutes west from Greenwich; thence due south to the Mississippi; thence along the middle or centre of the main channel of said river to latitude forty-two degrees and thirty minutes north; thence due east to the place of beginning. It therefore embraces all that portion of the United States lying between the State of Michigan on the east, and the Mississippi on the west, which separates it from the Territory of Iowa; and between the State of Illinois on the south and the British possessions on the north; extending from forty-two and a half to the forty-ninth degree of north latitude, and embracing about ten degrees of longitude. Taking the length of a degree of latitude and longitude in

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this part of the globe, it is ascertained that Wisconsin is about five hundred and fifteen miles from east to west, and four hundred and forty-nine miles from north to south, measuring from the extreme points. But the average or mean extent of the Territory in longitude is only about one hundred and eighty-five miles, showing, therefore, a superficial area of eighty-three thousand and sixty-five square miles or sections; equal to twenty-three hundred townships of six miles square each. Wisconsin is, therefore, more than one-half larger than Virginia, and more than twice as large as the State of New York. This calculation, however, is only an approximation to the truth, for so little is accurately known of the course of the Menomonee, Montreal, and a part of the Mississippi rivers, that no accurate estimate can be made of the extent of territory embraced within the limits of Wisconsin. The Menomonee has been ascertained to have a course very different from what was supposed, at the time it was selected as a part of the boundary; and a revision of that portion of the boundary between Michigan and Wisconsin which lies between Green Bay and Lake Superior becomes necessary, and will probably soon receive the action of Congress. A survey was made in 1840 and 1841, by Captain Cram, and it now only remains for Congress to decide upon the exact boundary. The Wasecota, a branch of the Menomonee, is ascertained to have its source nearest the Lake of the Desert, and will therefore probably be established as a part of the boundary.

Wisconsin being a part of the "Territory of the United States northwest of the Ohio river," claims, and indeed, Congress has by direct action confirmed to her* all the

* In the act establishing the Territory of Wisconsin, section twelve, where it is expressly declared "that the inhabitants of the said Territory shall be entitled to enjoy, all and singular the rights and advantages granted and secured to the people of the territory of the United States northwest of the Ohio river, by the articles of

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rights and privileges secured by the ordinance of Congress of July 13, 1787, one of which is, "that Congress shall have authority to form one or two States in that part of said territory which lies north of an east and west line drawn through the southerly bend or extreme of Lake Michigan;" thereby fixing unalterably (without common consent) the southern boundaries of Michigan and Wisconsin. Notwithstanding this plain provision of the ordinance, which is declared to be "articles of compact between the original States, and the people and States in the said territory, and for ever to remain unalterable unless by common consent," yet Congress, in establishing the boundaries of the State of Illinois, extended that State about sixty miles north of the line thus unalterably established by the ordinance. This is claimed to be obviously unjust, and contrary to the spirit and letter of the compact with the original States. The subject of reclaiming this portion of our territory has been agitated in the Legislative Assembly. Michigan was compelled by superior influence to submit to a compromise by which she obtained, besides other valuable considerations, a much larger portion of territory than that in dispute; and Wisconsin may from the same cause be obliged to submit to wrong for want of ability to enforce her rights.

It is also contended by many that the portion of country set off to Michigan on Lake Superior, between the straits of Mackina and the Montreal river, as a compensation in part for the strip of land given to Ohio from her southern border, should also have constituted a portion of Wisconsin; and especially as Michigan never made the least claim to it, and as the convenience of the inhabitants (when it becomes inhabited) will be best consulted by uniting them with Wisconsin. The validity of our claim to this territory,

compact contained in the ordinance for the government of the said Territory, passed on the thirteenth day of July, one thousand seven hundred and eighty-seven."

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however, may be questioned; for it cannot be made out as clearly as in the case of the territory given to Illinois.

The difficulties which it has been apprehended might at some future time arise between the United States and Great Britain relative to that portion of our northern boundary lying between Lake Superior and the Lake of the Woods, have been prevented by the settlement of that question in the treaty of 1842, usually known as "Webster's Treaty." Great Britain claimed all that portion of our Territory lying north of the St. Louis river, while we claimed that the Kamanistaquia, or Dog river, should be the boundary. By the treaty, an intermediate route was agreed upon; and here again it is contended that the general government has given away a portion of the territory which should properly have belonged to Wisconsin.

It is not probable that Illinois, Michigan and Great Britain will be very ready to surrender the territory now claimed by them, and hence it becomes an important question to determine in what manner these disputes shall be settled. As in all cases of a similar nature, we may expect some difficulties to arise. It has been proposed in the Legislature to abandon all claims of this kind, upon condition that Congress shall construct certain works of internal improvement which are at present very much needed; and if the whole subject can be thus easily disposed of, it is undoubtedly the best policy for the United States to accept of this very reasonable compromise.

It is to be hoped that these questions of boundary may be settled to the satisfaction of all concerned, before they become of such importance as to create much excitement, trouble or difficulty in their adjustment.

There are no mountains, properly speaking, in Wisconsin; the whole being one vast plain, varied only by the river hills, and the gentle swells or undulations of country usually denominated "rolling." This plain lies at an elevation of from six to fifteen hundred feet above the level

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of the ocean. The highest lands are those forming the dividing ridge between the waters of Lake Superior and the Mississippi. From this ridge there is a gradual descent towards the south and southwest. This inclination is interrupted in the region of the lower Wisconsin and Neenah rivers, where we find another ridge extending across the Territory, from which proceeds another gently descending slope, drained mostly by the waters of Rock river and its branches. These slopes indicate, and are occasioned by, the dip or inclination of the rocky strata beneath the soil. The Wisconsin hills and many of the bluffs along the Mississippi river often attain the height of three hundred feet above their base, and the blue mound was ascertained by Dr. Locke, by barometrical observations, to be one thousand feet above the Wisconsin river at Helena. The surface is further diversified by the Platte and Sinsinawa Mounds, but these prominent elevations are so rare that they form very marked objects in the landscape, and serve the traveller in the unsettled portions of the country, as guides by which to direct his course. The country immediately bordering on Lake Superior has a very abrupt descent towards the lake; hence the streams entering that lake are full of rapids and waterfalls, being comparatively worthless for all purposes of navigation, but affording a vast superabundance of water power, which may at some future time be brought into requisition to manufacture lumber from the immense quantities of pine trees with which this part of the Territory abounds.

There is another ridge of broken land running from the entrance of Green Bay in a southwesterly direction, forming the "divide" between the waters of Lake Michigan and those running into the Bay and Neenah, and continuing thence through the western part of Washington county, crossing Bark river near the Nagowicka lake, and thence passing in the same general direction, through Walworth county, into the State of Illinois. The irregular and broken ap-

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pearance of this ridge is probably owing to the soft and easily decomposed limestone rock of which it is composed.

On our northern border is Lake Superior, the largest body of fresh water in the world, and on the east is Lake Michigan, second only to Lake Superior in magnitude, forming links in the great chain of inland seas by which we are connected with the "lower country" by a navigation as important for all purposes of commerce as the ocean itself. Besides these immense lakes, Wisconsin abounds in those of smaller size, scattered profusely over her whole surface. They are from one to twenty or thirty miles in extent. Many of them are the most beautiful that can be imagined—the water deep and of crystal clearness and purity, surrounded by sloping hills and promontories covered with scattered groves and clumps of trees. Some are of a more picturesque kind, being more rugged in their appearance, with steep, rocky bluffs, crowned with cedar, hemlock, spruce, and other evergreen trees of a similar character. Perhaps a small rocky island will vary the scene, covered with a conical mass of vegetation, the low shrubs and bushes being arranged around the margin, and the tall trees in the centre. These lakes usually abound in fish of various kinds, affording food for the pioneer settler; and among the pebbles on their shores may occasionally be found fine specimens of agate, carnelian, and other precious stones. In the bays where the water is shallow and but little affected by the winds, the wild rice (*Zizania aquatica*) grows in abundance, affording subsistence for the Indian, and attracting innumerable water birds to these lakes. The rice has never been made use of by the settlers in Wisconsin as an article of food, although at some places it affords one of the principal means of support for the red men. It is said to be about equal to oatmeal in its qualities, and resembles it in some degree in taste. The difficulty of collecting it, and its inferior quality, will always prevent its use by white men, except in cases of extreme necessity.

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The Lake of the Woods, and Rainy Lake, near our north boundary, have been so often described as to need only to be mentioned here. Their thousand small wooded islands give them a peculiarly interesting and picturesque character not to be found in any other scenery in the world. Among the small lakes may be mentioned Lake Winnebago, St. Croix (upper and lower), Cass Lake, Lake Pepin, the Four Lakes, the Mille Lac, Ottawa, Pewaugan, Pewaukee, Geneva, Greene, Koshkonong, and many others, all more fully described in other parts of this work.

The Mississippi, the great river of rivers, forms, as before remarked, the western boundary of Wisconsin. It is augmented in this Territory by the waters of the Wisconsin, Black, Chippewa, St. Croix, and St. Francis rivers, which alone would be sufficient to form a very respectable "Father of Waters," but which scarcely swell the mighty flood of the Mississippi; these with Rock river, which empties into the Mississippi in Illinois, and the St. Louis, Bois Brule, Mauvaise and Montreal rivers, tributaries of Lake Superior; and the Menomonee, Peshtego, Oconto, Pensaukee, Fox or Neenah, and Wolf rivers, tributaries of Green Bay; and Manitowoe, Sheboygan, and Milwaukee rivers, tributaries of Lake Michigan, are the principal rivers in Wisconsin. Innumerable smaller streams and branches run through the whole extent of the Territory, so that no portion of it is without an abundant supply of good, and generally pure water. The Mississippi is navigable as far up as the Falls of St. Anthony. The Wisconsin is navigable as far up as the pine region above the Portage by small steamboats, at certain seasons of the year; and they have been up Rock river as far as Aztalan, in Jefferson county, but these streams are comparatively of little value for the purposes of navigation. All the principal rivers are, however, navigable for canoes. Their waters usually originate in springs and lakes of pure and cold water. Many of them, especially in the northern or primitive

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region, are precipitated over rocky barriers, forming beautiful cascades or rapids, and affording valuable sites for mills and manufactories of all kinds. The falls of St. Anthony, on the Mississippi, seven miles above the mouth of the St. Peter's, are only surpassed by the great Niagara, in picturesque beauty and grandeur; and are now becoming a place of fashionable resort for summer tourists.

The rivers running into the Mississippi take their rise in the vicinity of the sources of those running into the lakes, and they often originate in the same lake or swamp, so that the communication from the Mississippi to the lakes is rendered comparatively easy at various points. The greatest depression in the dividing ridge in the Territory is supposed to be at Fort Winnebago, where the Wisconsin river approaches within half a mile of the Neenah, and where, at times of high water, canoes have actually passed across from one stream to the other. Some of the rivers are supplied from the tamarack swamps, from which the water takes a dark color.

Wisconsin does not fall behind the other portions of the western country in the monuments it affords of the existence of an ancient people who once inhabited North America, but of whom nothing is known except what can be gathered from some of the results of their labors. The works at Aztalan, in Jefferson county, are most known and visited, but there are many other localities which are said to equal them in interest and importance. The substance called brick at this place, is evidently burned clay, showing marks of having been mixed with straw, but they were not moulded into regular forms. There is a class of ancient earth-works in Wisconsin, not before found in any other country, being made to represent quadrupeds, birds, reptiles, and even the human form. These representations are rather rude, and it is often difficult to decide for what species of animal they are intended; but the effects of time may have modified their appearance very much since they

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were originally formed. Some have a resemblance to the buffalo, the eagle, or crane, or to the turtle or lizard. One representing the human form, near the Blue Mounds, is, according to R. C. Taylor, Esq., one hundred and twenty feet in length: it lies in an east and west direction, the head toward the west, with the arms and legs extended. The body or trunk is thirty feet in breadth, the head twenty-five, and its elevation above the general surface of the prairie is about six feet. Its conformation is so distinct that there can be no possibility of mistake in assigning it to the human figure.* A mound at Prairieville, representing a turtle, is about five feet high; the body is fifty-six feet in length; it represents the animal with its legs extended, and its feet turned backwards. It is to be regretted that this interesting mound is now nearly destroyed. The ancient works are found in all parts of the Territory, but are most abundant at Aztalan, on Rock river, near the Blue Mounds, along the Wisconsin, the Neenah and the Pishtaka rivers, and near Lake Winnebago.

The mounds are generally scattered about without any apparent order or arrangement, but are occasionally arranged in irregular rows, the animals appearing as if drawn up in a line of march. An instance of this kind is seen near the road seven miles east from the Blue Mounds, in Iowa county. At one place near the Four Lakes, it is said that one hundred tumuli, of various shapes and dimensions, may be counted—those representing animals being among others that are round or oblong.

Fragments of ancient pottery of a very rude kind are often found in various localities. They were formed by hand, or moulded, as their appearance shows evidently that

* The reader is referred to the "Notice of Indian Mounds, &c., in Wisconsin," in Silliman's Journal, vol. 34, p. 88, by R. C. Taylor; and to the "Description of Ancient Remains in Wisconsin," by S. Taylor, vol. 44, p. 21, of the same work, for more detailed descriptions and drawings of these interesting animal mounds.

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these vessels were not turned on a "potter's wheel." Parts of the rim of vessels usually ornamented with small notches or figures, are most abundant.

A mound is said to have been discovered near Cassville, on the Mississippi, which is supposed to represent an animal having a trunk like the elephant, or the now extinct Mastodon. Should this prove true, it will show that the people who made these animal earthworks, were contemporaries with that huge monster whose bones are still occasionally found; or that they had then but recently emigrated from Asia, and had not lost their knowledge of the elephant.

The first white persons who penetrated into the regions of the upper Lakes, were two young fur traders, who left Montreal for that purpose in 1654, and remained two years among the Indian tribes on their shores. We are not informed as to the details of their journey, but it appears that they returned with information relative to Lake Superior and perhaps Lake Michigan and Green Bay; for in 1659 the fur traders are known to have extended their traffic to that bay. In 1660 we are informed that Rene Mesnard explored the southern shore of Lake Superior; and while crossing the Portage at Keweena, was lost in the forest.

The first settlement of Wisconsin, may be dated back as far as 1665, when Claude Alloüez established a mission at La Pointe on Lake Superior, four years before any permanent establishment was made at Green Bay. This was before Philadelphia was founded by William Penn, and before the settlement of Charleston, in South Carolina.

The first account we have of a voyage along the west shore of Lake Michigan (or Illinois Lake as it was then called) was by Nicholas Perrot, who, accompanied by some Potowatomies, passed from Green Bay to Chicago, in 1670. Two years afterwards, the same voyage was undertaken by Alloüez and Dublon. They stopped at the mouth of the Milwaukee river, then occupied by Mascoutin and Kickapoo Indians.

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In 1673, or four years after the establishment at the Bay of Puans, now Green Bay (1673), Father Joseph Marquette, accompanied by Joliet, went up the Neenah (Fox) river, crossed the portage, and descending the Wisconsin, discovered the Mississippi on the 17th of June.* The Legislature has very properly named a country on the Neenah in memory of the first white man who ever saw the "Father of Waters" in this part of its course. It was six years after this discovery that La Salle made his voyage up the lakes in the first vessel (the Griffin) built above the Falls of Niagara, and who claimed the honor of having first discovered the Mississippi. An interesting account of this voyage was published by Louis Hennepin, in Paris, and is preserved in the Transactions of the American Antiquarian Society. The Griffin was about sixty tons burden, and carried five small guns. She sailed on the 7th of August, 1679, with thirty-four men, and on the 2d of September, they left Mackina, for the Bay of Puans. "Mr. La Salle," says Hennepin, "without taking anybody's advice, resolved to send back the ship to Niagara, laden with furs and skins, to discharge his debts. Our pilot, and five men with him, were therefore sent back. They sailed on the 18th, with a westerly wind. It was never known what course they steered, nor how they perished, but it is supposed the ship struck upon the sand, and was there buried. This was a great loss to Mr. La Salle, and other adventurers, for that ship, with its cargo, cost about sixty thousand livres." Thus the want of harbors on Lake Michigan began to be felt more than a century and a half ago, and the fate of the Griffin was only a precursor of a thousand similar disasters.

The adventurers continued their voyage in four canoes, along the coast of the lake by Milwaukee, to "the mouth

* Marquette was not the *first* discoverer of the Mississippi—that honor belongs to Hernando de Soto, who crossed it in 1541. See Bancroft's Hist. U. S., i., p. 51. From this work we have taken many of the facts and dates given above.

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of the river Miamis " (Chicago ?) where a fort was erected. During this voyage they experienced one of those severe storms which are still so much dreaded on this lake. "The violence of the wind obliged us to drag our canoes sometimes to the top of the rocks, to prevent their being dashed to pieces. The stormy weather lasted four days, during which we suffered very much, and our provisions failed us; we had no other subsistence but a handful of Indian corn, once in twenty-four hours, which we roasted or else boiled in water; and yet rowed almost every day from morning till night. Being in this dismal stress, we saw upon the coast a great many ravens and eagles, from whence we conjectured there was some prey, and having landed upon that place, we found above the half of a fat wild goat which the wolves had strangled. This provision was very acceptable to us, and the rudest of our men could not but praise the Divine Providence who took so particular care of us."

From this place La Salle returned, and Hennepin with two men (Picard and Ako) crossed over to the Illinois, and descended that stream and the Mississippi, to the Gulf of Mexico, being thus the first to discover the mouth of that mighty river. While returning they were taken by a party of Indians, and travelled with them nineteen days up the Mississippi to within six leagues of the Falls of St. Anthony, a name then first applied to this romantic place in honor of the patron saint of the expedition. From thence they travelled for sixty leagues, on foot, to the habitations of the Indians, where they were joined by Sieur de Luth, and five men. Towards the end of September (1680), they descended the river named by them the St. Francis, to the Mississippi, and passing by way of the Wisconsin and Fox rivers, arrived at Green Bay, where they found many Canadians, come there for the purpose of trade.

The Baron La Hontan, who published an account of his wanderings in 1703, visited Green Bay in 1689; from thence he went across to the Mississippi. His account of

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Long river, a branch of the Mississippi from the west, has been supposed to be entirely fabulous, but according to Mr. I. N. Nicollet the Cannon (or Canoe) river of Iowa agrees very well with this account.

We have no data at hand from which to estimate the quantities of furs purchased by the French at this early period, and sent to Europe. This constituted almost the sole motive for "locating" in these wild, and till then unknown shores. The French are possessed of the peculiar faculty of making themselves "at home" with the Indians, and lived without that dread of their tomahawks which is so keenly felt by the pioneers of English settlements. They were not able, however, to maintain friendly terms with all the different tribes into which the Indian population was divided, for before the close of the seventeenth century we find them united with the Chippewas and Menomonees, contending with the Sauks and Foxes for a free passage across the country from Green Bay to the Mississippi, in which they met with complete success, by a decisive battle fought at Butte des Morts, or the Hill of the Dead. "The Ottagamies (Foxes) had selected a strong position upon the Fox river, which they fortified by three rows of palisades and a ditch. They here secured their women and children, and prepared for a vigorous defence. Their entrenchment was so formidable that De Louvigny, the French commander, declined an assault, and invested the place in form. By regular approaches he gained a proper distance for mining their works, and was preparing to blow up one of the curtains, when they proposed a capitulation. Terms were eventually offered and accepted; and those who survived the siege were preserved and liberated.* No further difficulties existed between the French traders and missionaries, and the Indians, from that period down to the present time. How different would it probably have been, had al-

* Cass—Hist. and Sci. Sketches of Michigan, p. 22 (1834).

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most any other nation attempted to penetrate so far into the country of these "wild men of the woods!"

P. De Charlevoix made a voyage through Lake Michigan, and thence by way of the Illinois and Mississippi to New Orleans, and published his journal; and also a "History of New France," as this part of the world was then named, in 1721.

Wisconsin remained in possession of the French, and constituted a portion of "New France," until 1763, when it was surrendered to Great Britain, and became subject to her government. This change of government, it may be supposed, produced but little change in the condition of things in places so remote from the seat of government. Green Bay and Prairie du Chien were then the only posts occupied within our limits. British authority was exercised over us from this period until the northwestern country was transferred to the American government, in 1794, being seven years after the date of the ordinance for the establishment of a "Territorial Government" in the same. During this period of thirty-one years, but little change took place in Wisconsin—the Indian continued to hunt the deer, and to trap the beaver unmolested, and bartered his furs at Green Bay, or Mackina, for the trifles, or "fire water" of the trader.

As early, however, as 1780, Peosta, the wife of an Ottagamie warrior, discovered lead near the Mississippi river; and in 1778, Julian Dubuque obtained from the Indians at Prairie du Chien, a grant of land, extending seven leagues on the Mississippi, and three leagues deep. This grant was recognized by the Spanish government in 1796, but was not confirmed by our own. For several years the mining operations were quite limited, as may well be supposed; and in 1805, Mr. Dubuque informed Lieut. Pike that he raised from twenty to forty thousand pounds annually. Schoolcraft informs us that the settlement of Prairie du Chien was first begun in 1783, by Mr. Giard, Mr. An-

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taya and Mr. Dubuque, but that there had formerly been an old settlement about a mile below the site of the present village, which existed during the time the French had possession of the country.

Governor Cass, in 1819, one year after this country was annexed to the territory under his authority, proposed to the Secretary at War (J. C. Calhoun) that an expedition be fitted out to explore it, which was accomplished the following year. The party consisted of Lewis Cass, Governor of Michigan Territory; Dr. Alexander Wolcot, physician; Capt. D. B. Douglass, civil and military engineer; Lieut. Æneas Mackay, commanding the soldiers; James D. Doty, secretary to the expedition; Robert A. Forsyth, Charles C. Trowbridge, Alexander R. Chase, and Henry R. Schoolcraft, mineralogist, whose "Narrative Journal," published in 1821, is replete with valuable information relative to this country. From this work we learn that Wisconsin was even then but little more than the abode of a few Indian traders scattered here and there throughout the Territory, as at Lapointe, Fond du Lac—on the Bois Brule—the St. Croix—Sandy Lake—Leech Lake—Milwaukee—and many other points. These posts were usually protected by a stockade, enclosing, perhaps, a hundred feet square; that at Sandy Lake had bastions at two of its angles pierced for musketry. "The pickets were of pitch-pine, thirteen feet above the ground, a foot square, and pinned together with stout plates of the same wood. There were three gates, which are shut whenever liquor was dealt out to the Indians. The stockade enclosed two rows of buildings, containing the provision store, work-shop, warehouse, rooms for the clerks, and accommodations for the men. On the west and southwest angles of the fort were four acres of ground enclosed with pickets, and devoted to the culture of potatoes." This fort was first erected in 1794, by the Northwest Fur Company. The garrisons at Prairie du Chien and at the mouth of the St. Peter's were first established and occupied in 1819.

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At this time but little was known of the value of the lead and copper mines on the upper Mississippi—only three places being known besides the Dubuque mines, where lead could be obtained, and these were worked exclusively by the women of the Fox Indians, assisted perhaps by the old men—the young men and warriors holding themselves above it. "They employ the hoe, shovel, pick-axe and crow-bar, in taking up the ore. These things are supplied by the traders, but no shafts are sunk, not even of the simplest kind, and the windlass and the bucket are unknown among them. They run drifts into the hill as far as they can conveniently go, without the use of gunpowder, and if a trench caves in, it is abandoned. When a quantity of ore has been got out, it is carried in baskets by the women to the Mississippi, where it is purchased by the traders, at the rate of two dollars for a hundred and twenty pounds, payable in goods at Indian prices." The settlement at Green Bay is mentioned by Schoolcraft upon his approach down the Fox river, as a country of exceeding beauty, "checkered as it is with farmhouses, fences, cultivated fields, the broad expanse of the river, the bannered masts of the vessels in the distant bay, and the warlike display of military barracks, camps and parades. The scene burst suddenly into view, and no combination of objects in the physiognomy of a country could be more happily arranged, after so long a sojournment in the wilderness, to recall at once to the imagination the most pleasing recollections of civilized life. The settlement now consists of sixty dwelling-houses, and five hundred inhabitants, exclusive of the garrison. They are, with few exceptions, French, who have intermarried with Indian women, and are said to be indolent, gay, intemperate and illiterate. They are represented to have been subservient to the interests of the British, during the late war. This settlement is now the seat of justice for Brown county, in the Territory of Michigan, and the ordinary courts of law are established." Prairie du Chien con-

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tained a similar population, of about five hundred, occupying about eighty buildings, the principal part of which were of logs, arranged in two streets, parallel with the river. On the 26th of August, the party encamped at the mouth of the Milwaukee river, where they found "two American families, and a village of Pottowatomies: it is the division line between the lands of the Menomonees and the Pottowatomies; the latter claim all south of it." At the portage between the Wisconsin and Fox rivers, they found "a good wagon road, and a Frenchman lives on the spot, who keeps a number of horses and cattle, for the transportation of baggage, for which twenty-five cents per hundred-weight is demanded."

In 1823, Major Long commanded a party, on an expedition similar to that of Governor Cass, that traversed the country from Chicago to Prairie du Chien, where they found only about one hundred and fifty souls. From thence they went up the Mississippi and the St. Peter's, and back by the north shore of Lake Superior.

In 1832, another expedition passed through the country, under the direction of Schoolcraft, and from his pen we have a volume published in 1834, being a "Narrative of an expedition through the upper Mississippi to Itasca lake, the actual source of that river."

The Sauk war, which broke out this year (1832), perhaps did more than anything else to turn the attention of emigrants and others to this country, by bringing it into notice. It is not proposed here to enter into details concerning this Indian disturbance, having but little to add to what has already been published upon the subject.

Soon after these troubles were ended, the lands were surveyed by order of the Government, and not till then was commenced that rapid settlement of the country which has now filled it with a population of more than ONE HUNDRED THOUSAND SOULS.

Mr. I. N. Nicollet, with his barometer and astronomical

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instruments, has, within the last few years, explored the regions adjacent to the upper Mississippi, under the authority of the United States Government; and his report published in 1843 is replete with valuable information relative to that remote, unsettled region. The latitude and longitude of many points were ascertained and their elevation above the ocean; and his map of the upper Mississippi is supposed to be very nearly correct. The observations made at the source of that stream are important, as showing our western boundary north of that point.

Since this country became a portion of the United States, Wisconsin has successively been under the government of Virginia, Ohio, Illinois and Michigan. The territory once belonged to Virginia, or at least she has now the full credit of having ceded it, together with all the "territory northwest of the Ohio river," to the United States. Up to the year 1800, Wisconsin was under the authority of the Territorial Government established in Ohio. In that year she was attached to "Indiana Territory," and remained so until 1809, when the "Illinois Territory" was organized, extending north to Lake Superior, and of course including Wisconsin. When Illinois took her place in the Union, in 1818, our Territory was finally attached to Michigan, and remained so until the organization of the present Territorial Government, in 1836.

We see, therefore, that within the space of one hundred and sixty-six years, Wisconsin has been successively ruled by two kings, one State, and four Territories, and we have finally set up for ourselves, without any great and exciting events to produce these revolutions. The people have submitted to each change without a struggle or a murmur. They have been under the government of France from 1670 to 1763, or - - - - - - - 93 years.

Of Great Britain, from 1763 to 1794, - 31 "

Of Virginia and Ohio, from 1794 to 1800, - 6 "

Of Indiana, from 1800 to 1809, - - 9 "

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Of Illinois, from 1809 to 1818,	9 years.
Of Michigan, from 1818 to 1836,	18 "
Total,	166 years.

In the more settled portions of the Territory, but few Indians are now to be found; most of them having removed to the north, or to the west side of the Mississippi. Occasionally a band of Menomonees take up their winter quarters on the head branches of Rock river, and other places, and bring their peltries to Milwaukee for sale. The Chippewas are the most numerous, occupying the country bordering on Lake Superior, and about the source of the Mississippi. The Sioux or Dacotas, whose country lies principally on the west side of the Mississippi, occasionally cross that stream and occupy a portion of our Territory at the north. These, with a few Winnebagos, and an occasional Pottowatomie, make up the tribes of Indians occupying or inhabiting Wisconsin.

The Stockbridge and Brothertown Indians on the east side of Lake Winnebago in Calumet County, have been admitted to all the rights and privileges of citizens of the United States; being the first case of this kind in the history of our government. With the Oneidas, located a few miles west of Green Bay, they emigrated from New York about the year 1833. They are in character and habits much more like the whites than like the wild Indian. They are sober, honest, and industrious farmers, and occupy fixed places of abode. They have one member in the Legislature.

The Chippewas and Sioux are at enmity with each other, and have been (notwithstanding all the efforts made to reconcile them) as long as they have been known by white men. Their deadly hatred will probably become satisfied only by the entire extermination of one of these powerful and warlike tribes. The warriors on both sides are distinguished for many acts of daring bravery. In two

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battles fought in the summer of 1839, between these tribes, it is estimated that two hundred Indians, mostly of the Chippewas, were killed.

The Indians have, by various treaties, ceded to the United States all their lands in Wisconsin, except a portion lying between the west end of Lake Superior and the head waters of the Mississippi. This, therefore, is all that now remains in possession of the original owners—the Indians.

The GOVERNOR is appointed for three years, by the President of the United States, by and with the advice and consent of the Senate. He is, *ex officio*, Superintendent of Indian affairs within the Territory; and his salary is two thousand five hundred dollars per annum—paid by the General Government. The Governor is required, by the "organic law" establishing the Territorial Government, to reside within the Territory; is commander-in-chief of the militia; and has the power of vetoing the acts of the Legislature. He may at any time be removed by the President of the United States; is required to commission all officers under the laws of the Territory; and it is his duty to take care that the laws are faithfully executed.

The SECRETARY is appointed in like manner, and holds his office for four years, unless sooner removed by the President of the United States. It is his duty to record and preserve all the laws and proceedings of the Legislative Assembly, all the acts and proceedings of the Governor in his executive department; to transmit one copy of the laws and one copy of the executive proceedings to the President of the United States, and at the same time two copies of the laws to the Speaker of the House of Representatives. He is authorized to act as Governor, in case of the death, removal, resignation, or necessary absence of that officer. His salary is twelve hundred dollars.

The LEGISLATURE consists of the Governor, a Council of thirteen members, elected for two years, and a House of

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Representatives, of twenty-six members, elected for one year. The members are apportioned among the different counties, according to the population (Indians excepted). The Legislative power extends "to all rightful subjects of legislation"—but no law can be passed interfering with the sale or disposal of the public lands. No tax can be imposed on the public lands, and the property of non-residents cannot be taxed higher than that of residents. All laws have to be submitted to, and if disapproved by, the Congress of the United States, they become null and void; and laws incorporating banks do not take effect unless approved by Congress. The members of the legislature receive three dollars per day, when in session, and three dollars for every twenty miles travel in going to and returning from Madison. They meet annually, on the first Monday in December, and their sessions are limited to seventy-five day, or rather by the amount of the appropriations made by Congress.

The JUDICIAL POWER is vested in a Supreme Court, District Courts, Probate Courts, and Justices of the Peace.

The SUPREME COURT consists of a Chief Justice and two associate Judges, appointed during good behavior, who hold a term annually, at Madison, the seat of Government, on the third Monday in July. The salary of the Judges is eighteen hundred dollars.

The DISTRICT COURT is held twice a year, in each county, by one of the Judges of the Supreme Court, at such times as are prescribed by law. The Territory is divided into three Judicial Districts. The First, Charles Dunn, District Judge, consists of the counties of Crawford, Grant, and Iowa. The Second, David Irwin, Judge, consists of the counties of Walworth, Rock, Green, Dane, Jefferson, Sauk, and Portage. The Third, Andrew G. Miller, Judge, consists of the counties of Brown, Milwaukee, Racine, Washington, Dodge, and Fond du Lac.*

* The remaining counties are not organized for judicial purposes, but are attached to some one of those here named.

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The Supreme and District Courts possess Chancery, as well as common law jurisdiction.

The JUDGES OF PROBATE, and JUSTICES OF THE PEACE, are elected by the people. The Justices have no jurisdiction where the title of land is in dispute, nor where the sum claimed exceeds fifty dollars.

A DELEGATE TO CONGRESS is elected every two years, who is entitled to a seat in the House of Representatives, and the privilege of speaking, but has no right to vote on any question.

An ATTORNEY, and MARSHAL, are appointed by the President, for the term of four years, unless sooner removed: and the Legislature have created the offices of Treasurer, Auditor, and Superintendant of public property.

WISCONSIN has now a population sufficient to entitle her to claim an admission into the Union, as an independent State, on an equal footing with the other original States, that population being fixed by the ordinance of 1787, at sixty thousand; and a very general disposition is now manifested among the people to organize a State government without delay. We are then entitled to a place in the Union on an equal footing with the other States.

There are three Land Offices in Wisconsin, for the disposal of public or government lands; at Milwaukee, Mineral Point, and Green Bay.

The MILWAUKEE Land District includes all the land from range number nine east, to Lake Michigan; and from the Illinois State line, to town ten, inclusive; and also towns eleven and twelve, in the ranges number twenty, twenty-one, and twenty-two. The first public sale at this office was held in the early part of the year 1839, and the amount of money received was nearly half a million of dollars.

The GREEN BAY Land District includes all the country north of the Milwaukee District, and the first public sale was in 1835.

The MINERAL POINT District lies west of the Milwaukee

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District, extending to the Mississippi river, and including all the "Mineral Lands." The first sales at Mineral Point also took place in the year 1835.

The following table shows the amount of land sold in Wisconsin, and the amount paid for it. It is made from the reports of the Commissioner of the General Land Office, at Washington:

Years.	Acres.	Amount.
1835	217,543.91	$316,709.07
1836	646,133.73	808,932.32
1837	178,783.45	223,479.45
1838	87,256.31	109,416.14
1839	650,722.82	819,909.90
1840	127,798.34	159,848.48
1841	101,731.17	127,446.31
1842	127,895.58	163,778.60
1843	167,746.30	214,294.00
1844	260,440.85	332,392.24
1845	392,540.00	491,900.00
Total,	2,958,592.46	$3,768,106.51

It thus appears, that Wisconsin has already contributed nearly FOUR MILLIONS OF DOLLARS for the support of the general government, from this item alone; and that the average price paid for lands here, is less than two cents over the minimum price of $1,25 established by the government; and also that the sales have been rapidly increasing for the last few years, so that they now amount to nearly half a million of dollars per annum. It is gratifying to learn that a large proportion of the entries is made for the purpose of actual cultivation, as is indicated by the fact, that they are mostly for the smaller subdivisions. Thus, of 5255 entries made at Milwaukee in 1845, no less than 4159 were for lots not exceeding forty acres each, and only 442 were for lots exceeding eighty acres each. In a late report from the general land office, it is stated that there were on the 30th day of June, 1845, in Wisconsin, 5,737,085 acres of land, that had been offered at public sale, and were then subject to entry at the minimum price.

The public lands in Wisconsin are, as elsewhere in the

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west, surveyed into townships, six miles square each, and subdivided into sections of one mile square, or six hundred and forty acres. The townships are numbered from the base line, which is the south line of the Territory, and the ranges of townships are numbered east and west, from a line in the Mineral Point District running between the counties of Grant and Iowa, called the fourth principal meridian. Thus, Milwaukee is said to be in township number seven north, and in range number twenty-two east; and Cassville is in township number three north, and in range number five west of the fourth principal meridian. The sections in each township are numbered from one to thirty-six, beginning at the northeast corner, as shown in the following figure.

The section numbered sixteen is in all cases reserved for the use of schools in the township:

NORTH.

6	5	4	3	2	1
7	8	9	10	11	12
18	17	School 16 Section	15	14	13
19	20	21	22	23	24
30	29	28	27	26	25
31	32	33	34	35	36

WEST. EAST.

SOUTH.

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At the corners of each section, four trees are marked (one standing on each section) by the Surveyor, with the number of the township, range and section, thus:

T 7	T 7	T 7	T 7
R 14	R 14	R 14	R 14
S 14	S 15	S 22	S 23

These marks represent the corners, at which sections 14, 15, 22 and 23 come together.

By means of these marks, aided by a "sectional map," a person can, at any place in the woods, find his exact position, and relative situation, and the distance from other places.

The sections are divided into quarters of one hundred and sixty acres; and the quarters are divided by a line running north and south, into two equal half quarters, or eighty acre lots. They are designated as the east or west half of the quarter.

Great inducements are now offered by government to those who wish to purchase the public lands for actual improvement and cultivation. By the pre-emption law approved September 4th, 1841, it is provided that every person who shall make a settlement in person on the public land and erect a dwelling, shall be authorized to enter a quarter section or one hundred and sixty acres, at the minimum price, before the public sale; and thus secure the same against competition: and if any person shall settle upon and improve land subject to private entry, he may, within thirty days, give notice to the register of the land office of his intention to claim the land settled upon, and may within one year make proof of his right, and enter the land at the minimum price. He may thus be considered as a purchaser at a year's credit; but if he fails to give the notice, or to make the requisite proof, his land again becomes subject to private entry.

At the land sales in the Mineral Point District, all those

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tracts on which lead mines or diggings were found, or on which they were supposed to exist, were reserved to the United States, and have not yet been sold. These lands are claimed or occupied by miners, who hope to obtain a pre-emption to them from Congress. They were at first leased, under certain regulations by the government, for a rent of ten per centum of all the lead raised. The whole amount of land so reserved from sale is now estimated at about one million of acres. Owing to the difficulty of collecting this rent by the United States, it was, for several years, abandoned. Within the last four years, efforts were made by the government to collect lead rents, and resulted, according to the message of President Polk, as follows:

Amount expended in collection, -	$26,111 11
Value of lead collected - - -	6,354 74
Loss to the government in *four* years	19,756 37

Many veins or mines of lead have been discovered since the sale, on lands belonging to individuals; and it is supposed that these now yield as much lead as those on the reserved or public land. The attempt, therefore, to collect these rents reduced the value of the mines on the reserved lands below that of their neighbors, who have no rent to pay; a course of policy obviously unjust. To remedy this evil it is only necessary for Congress to dispose of these reserved lands, as other public lands are disposed of; and it is believed that the efforts now making to induce the government to adopt this policy, will be successful. It is supposed that this course would have a very beneficial effect upon the state of the mines, and even upon the character of the miners themselves.

The Register of the Land Office at Mineral Point, in a letter to the Commissioner of the General Land Office,* says, that "among the regulations for the government of the mining country, there was one which required that a mining lot should be two hundred and twenty yards square (ten

* Dated March 23, 1838.

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acres), and bounded by lines running due east, west, north and south. The usual course adopted by persons wishing to try their fortunes in the business of mining, was to seek out an unoccupied spot, where they supposed they could find lead, and commence digging. If they found ore in sufficient quantities to warrant a continuance of labor, they would measure off their ground and fix their corner stakes, and then continue their works until they traced their discovery to a valuable vein or sheet, or found it to be delusive. In a vast majority of cases the labor expended in these attempts to discover lead ore was entirely lost; and there are instances where men have expended years of labor, and large sums of money, and have never had the good fortune to discover a valuable vein or sheet of ore; consequently the property of the miner, in a valuable vein or discovery of lead ore, is held inviolable by most of the residents of the country; its sacredness is recognized by the courts and juries of the country; and he clings to it with a tenacity which will admit of no relaxation. The lots claimed would probably embrace about three thousand acres. They are the sole dependence of numerous families; their value has been discovered by the labor and perseverance of the miners; and were they dispossessed of them by government, their families would be reduced to want. It is thought that the miners have an equitable and just claim on the government for aid and protection; they accepted its invitation to labor upon its territory and to develope its wealth; they have staked off, and labored for years upon some five or six hundred ten acre lots, and have paid the government about two hundred and thirty thousand dollars for the privilege."

The Milwaukie and Rock River Canal Company, in 1838, in pursuance of authority granted in their charter, applied to Congress, on behalf of the Territory, and secured a grant or donation of land, consisting of all the "sections and fractional sections which are numbered with odd num-

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bers on the plats of public surveys within the breadth of five full sections, taken in north and south tiers on each side of said canal, from one end thereof to the other." This grant is made to the Territory to aid in the construction of the canal; and the land (as well as the even numbered sections within the same distance from the canal) cannot be sold for less than two dollars and fifty cents per acre, being double the usual minimum price of public lands. Consequently the government, by taxing double price for the even sections, realize exactly the same amount of money from the sale of these lands as if the grant or donation had not been made.

In July, 1839, a sale of Canal lands was held at Milwaukie, at which forty-three thousand four hundred and forty-seven acres were sold to the occupants of the land, at the minimum price of two dollars and fifty cents per acre.

The purchasers at this sale, and other persons occupying these canal, and reserved lands, feeling the unjustness of being compelled to pay double price for their lands, have induced the Legislature to remit the interest due; to repeal all laws authorizing further sales; and even to decline having anything further to do with the grant, and to ask Congress to repeal the act making the same, so that the lands may revert back to the general government, and be sold as other public lands, at one dollar and twenty-five cents per acre.

A donation of two townships, or forty-six thousand and eighty acres of land, has been made by Congress to the Territory, to be selected by the legislature, from any unsold public lands, for the purpose of establishing a University in the Territory; and in 1838, a law was passed "to establish the University of the Territory of Wisconsin," which is to be located at or near Madison, the seat of government. It is under the direction of a Board of Visitors, consisting of twenty-one members, of which the Governor, Secretary of the Territory, and Judges of the Supreme

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Court, are members. This board held one meeting at Madison soon afterwards—but all subsequent attempts at meeting have failed, on account of the great number necessary to form a quorum,—consequently nothing has been accomplished in relation to this important subject. The Legislature, a few years since, appointed Commissioners to select a portion of the lands, who made a selection of ten thousand two hundred and fifty acres in the Milwaukie Land District, and an equal quantity in the Green Bay District. In 1845, provision was made for selecting the remainder of the land. If this subject could be placed in the hands of a few discreet and practical men, it is believed that the lands donated might be made to produce a fund sufficient to establish, in a few years, an institution which would be a great honor and blessing to the country. Why is this matter so neglected in this enlightened age and country?

One thirty-sixth part of the whole Territory, being the section numbered sixteen in each township, is set apart for the use of schools. These sections are reserved from sale by the general government, and are to be transferred to Wisconsin whenever she becomes a State. School Commissioners are appointed in each town to take charge of these lands—to lease them for a term of years—and to attend to other matters relative to common schools. A tax is levied upon all the taxable property, for the purpose of erecting schoolhouses, and of paying the incidental expenses of teaching. Already have a great number of schoolhouses been erected in the different towns and school districts. The number of scholars taught in 1840, according to the census then taken, was nearly two thousand.

A college has been commenced, at a most beautiful location, on the Twin Lakes, twenty-seven miles west from Milwaukee, under the management of the Episcopalian Church. The energy which has characterized its commencement gives promise of much future usefulness.

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The preliminary arrangements have been made for the establishment of two other colleges, one at Beloit, in Rock county, under the direction of the Presbyterian and Congregational Churches, and one at Prairieville, Milwaukee county, to be called "Carrol College." Both are incorporated.

The Legislature, on the 5th of April, 1843, adopted resolutions asking an appropriation of land by Congress, for the purpose of establishing within the limits of this Territory, institutions for the instruction of the deaf and dumb, and blind, and an asylum for the insane.

It is much to be regretted that no notice has been taken of this subject by Congress.

In 1830, the United States census shows a population of three thousand two hundred and forty-five, in the counties of Brown, Crawford and Iowa, then constituting that portion of Michigan which is now established as a separate Territory of Wisconsin. In 1836, the population was over eleven thousand; in 1838, eighteen thousand; in 1840, thirty-one thousand; and in 1842, the date of the last enumeration, it was forty-six thousand six hundred and seventy-eight. Since that census was taken, the flood of new comers, by every arrival, has been such that there cannot be a reasonable doubt that the present population of Wisconsin exceeds one hundred thousand souls.

The following table shows the population of each county, at the date of the several enumerations:

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COUNTIES.	1830	1836	1838	1840	1842	1845*
Brown,	964	2,706	3,048	2,107	2,146	2,500
Calumet,				275	407	800
Chippewa,						800
Crawford,	692	854	1,220	1,502	1,449	3,000
Dane,			172	314	776	4,500
Dodge,			18	67	149	5,000
Fond du Lac,				139	295	1,800
Grant,			2,763	3,926	5,937	10,000
Green,			494	933	1,594	5,000
Iowa,	1,589	5,234	3,218	3,978	5,029	10,000
Jefferson,			468	914	1,638	5,000
La Pointe,						1,500
Manitowoc,				235	263	600
Marquette,				18	59	600
Milwaukee,		2,892	3,131	5,605	9,565	25,000
Portage,				1,623	646	2,000
Racine,			2,054	3,475	6,318	12,000
Richland,						100
Rock,			480	1,701	2,867	7,000
Sauk,				102	303	1,100
Sheboygan,				133	221	1,200
St. Croix,				809	1,200	1,500
Walworth,			1,019	2,611	4,618	10,000
Washington,			64	343	965	5,500
Winnebago,				135	143	500
	3,245	11,686	18,149	30,945	46,678	117,000

By this table there appears to be a diminution of population in the county of Brown, between 1838 and 1840, and in Portage county between 1840 and 1842: the first was occasioned by setting off new counties from Brown, and the last by the omission, in 1842, of the soldiers and officers of the garrison at Fort Winnebago. In 1842, the population of Milwaukee county was nearly one-fourth of the whole number in the Territory.

In 1840, the number of males was	18,757
" " females	11,992
showing an excess of males of	6,765
The number of free colored persons was	185
" slaves	11

* Estimated by members of the Legislature, in January, 1846.

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The number of deaf and dumb	5
" blind	9
" insane and idiots	13
Employed in agriculture	7,047
" mining	794
" commerce	479
" manufactures and trades	1,814
" learned professions	259
Number of white persons over twenty years of age who could not read or write	1,701
Scholars in common schools	1,937

Until very recently lead, copper, shot, and furs, were the chief articles of export from Wisconsin—nearly all her other products being consumed within herself for the support of those engaged in mining, and of the immense immigration which is so rapidly flowing in upon us; thus creating that best of all markets, a HOME MARKET, for all the surplus produce.

We may now add to this list, wheat, flour, pork, hides, wool, rags, beer, potash, salæratus, brooms, and many other articles of produce and manufacture, exported by way of the Lakes, to the eastern markets; and lumber sent down the Mississippi, from the pine regions of the Wisconsin, St. Croix, Chippewa, &c.

The following table shows the products of Wisconsin during the year 1839, as exhibited by the United States census of 1840:

Pounds of lead produced,	15,129,350
" wool,	6,777
" wax,	1,474
" hops,	133
" tobacco,	115
" silk cocoons,	½
" maple sugar,	135,288
" soap,	64,317
" tallow candles,	12,909
Value of produce of quarries,	$968
" poultry,	16,167

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Value of dairy produce,	$35,677
" orchard produce,	37
" home made or family goods,	12,567
" produce of market gardens,	3,106
" " nurseries, &c.,	1,025
" lumber produced,	202,239
" skins and furs,	120,776
Number of horses and mules,	5,735
" neat cattle,	30,269
" sheep,	3,462
" swine,	51,383
Bushels of wheat,	212,116
" barley,	11,062
" oats,	406,514
" buckwheat,	10,654
" Indian corn,	379,359
" potatoes,	419,608
Tons of hay produced,	30,938
Cords of wood sold,	22,910
Barrels of pickled fish,	9,021

This census further shows that there were then 178 stores and groceries, 14 lumber yards, 1 tannery, 3 distilleries, 3 breweries, 6 printing-offices, 4 flouring mills, 29 grist mills, and 124 saw mills.

It is made the duty of the Commissioner of Patents at Washington to collect statistics of the amount of agricultural products of the country, annually, and make report to Congress. Although these estimates are conjectural, and necessarily imperfect, yet they are the best data we have for the amount of produce. The following is the estimate for Wisconsin in 1844:

Wheat,	728,000 bushels,	Barley,	17,000 bushels,
Oats,	1,000,000 "	Rye,	4,000 "
Buckwheat,	23,000 "	Indian Corn,	560,000 "
Potatoes,	853,000 "	Hay,	67,000 tons.
Sugar,	216,000 pounds,		

This estimate is based on the supposition that the population had not increased to more than 52,379, which is only

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about half its real amount. With due allowance for the increase of population and of land cultivated, it is probable that this estimate could be increased about one half, and still be within the truth.

The value of taxable property in the different counties in 1845 was as follows:

Milwaukee,	$1,652,201 00	Crawford,	$271,982 00
Racine,	1,323,629 73	Portage,	190,978 69
Walworth,	1,294,573 00	Dodge,	174,900 69
Grant,	754,327 00	Fond du Lac,	149,387 54
Rock,	618,084 28	Manitowoc,	127,549 16
Iowa,	611,688 25	Sheboygan,	117,271 47
Dane,	420,194 25	Calumet,	106,319 98
Jefferson,	416,419 19	Sauk,	49,864 66
Washington,	394,610 00	Marquette,	36,971 00
Brown,	309,764 48	Winnebago,	14,834 50
Green,	288,854 96		
			1,240,059 69
	8,094,346 14	Total,	$9,324,305 83

Little has yet been done in the construction of public works in Wisconsin. Appropriations have been made by the general government, and expended on the following roads;

From Green Bay, by Milwaukee and Racine, to the State line—distance one hundred and fifty-eight miles.

From Milwaukee, by Aztalan and Madison, to the Mississippi, at a point opposite Dubuque.

From Sauk Harbor, on Lake Michigan, to Dekorre, on the Wisconsin river—distance eighty-six miles.

From Fond du Lac, by Fox Lake, to the Wisconsin river.

From Racine, by Janesville, to Sinipee, on the Mississippi—distance one hundred and fifty miles.

From Fort Howard, Green Bay, by Fort Winnebago at the Winnebago portage, to Fort Crawford, at Prairie du Chien, called the "Military Road"—distance from Fort Howard to Fond du Lac, fifty-six miles; thence to Fort

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Winnebago, sixty miles; thence to Fort Crawford, one hundred and nineteen miles.

From Southport by Geneva to Beloit sixty-nine miles.

From Sheboygan by Fond du Lac to Fox river, sixty-five miles.

Appropriations have also been made and expended for the construction of a pier at the north end of Lake Winnebago, and of harbors at Milwaukee, Racine and Southport. Surveys have been made by Capt. T. J. Cram, of the United States Topographical Engineers, for which appropriations were made by Congress, of the Wisconsin and Neenah rivers; of Rock river; and of the Catfish or river of the Four Lakes. The reports relative to these rivers have been published, accompanied by maps. Surveys have also been made for the sites of several harbors on Lake Michigan, by the U. S. Engineers, viz: at Kewaunee, Manitowoc, and Sheboygan.

The Territory having no adequate resources of its own, and its government being only a limited and temporary one, not having the powers of sovereignty like an independent State, does not engage in the construction of public works, for the improvement of the country; but numerous companies have from time to time been incorporated for that purpose, as may be seen by the following list:

The "Portage Canal Company" was incorporated by the Legislature of Michigan, in 1834, to construct a canal to connect the waters of the Neenah and Wisconsin rivers, at or near the place known as the Wisconsin Portage.

The "Wisconsin Internal Improvement Company" was also incorporated by the Legislature of Michigan, in 1835, "for the purpose of opening a communication by land or water, between Green Bay and the Mississippi river; by removing the obstructions in the bed of Fox river, or by creating a slack water navigation over its rapids, and by cutting a canal from the Fox to the Wisconsin or Rock rivers, or from Winnebago lake; or by constructing a rail or

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macadamized road around the rapids of the Fox and Rock rivers." This law, so general in its provisions, was not to take effect until it was approved by Congress.

The "La Fontaine Railroad Company" was incorporated at the first session of the Legislative Assembly of the Territory of Wisconsin, to construct a railroad from La Fontaine, on Fox river, at the Grand Kakalin, to Winnebago city, or some other convenient point on Lake Winnebago.

The "Belmont and Dubuque Railroad Company" was incorporated in 1836, to construct a railroad from Belmont to the nearest and most eligible point on the Mississippi, with power to extend it to Mineral Point, and to Dodgeville.

The "Milwaukee and Rock River Canal Company" was incorporated in January, 1838, to construct a canal, or slack water navigation from the town of Milwaukee to Rock river, and also a branch to connect with the Fox or Pishtaka river at or near Prairieville.

The "Root River Railroad Company" was incorporated in 1838, to construct a railroad from at or near Ball's mill, on Root river, to the head of the lower rapids on said river, with the privilege of extending the same to Racine.

The "Marquette and Kentucky City Canal Company" was incorporated in January, 1838, to construct a canal from Marquette, on Fox river or Lake Puckawa, to Kentucky city, (Dekorre) on Rock river.

The "Racine and Rock River Railroad Company" was incorporated in 1838, to construct a railroad from Racine to Janesville, on Rock river.

The "Pekatonica and Mississippi Railroad Company" was incorporated in 1839, to construct a railroad from Mineral Point to the Mississippi, by the nearest and most practicable route.

The "Pekatonica Navigation Company" was incorporated in 1839, to improve the navigation of the Pekatonica

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from Mineral Point to the Illinois State line, by canal or slack water navigation.

The "Michigan and Rock River Railroad Company" was incorporated in 1839, to construct a railroad from Rock river at or near the State line, to Lake Michigan, in the township of Southport. This Company was incorporated over again, in January, 1840.

The "Fox River Improvement Company" was incorporated in 1842, to improve the "navigation of the Neenah or Fox river, and the construction of rail or macadamized roads on the carrying places or portages on said river, from and to such points thereon as may be deemed practicable."

This list will indicate the improvements that have been deemed important, and which may hereafter be made, as the population and wealth of the country are such as to require them, and afford the means for their construction.

These companies have done but little towards completing the works for which they were incorporated. The Portage Canal Company have constructed a tow-path, and dug a channel through which small boats may pass, in times of high water, between the Neenah and Wisconsin rivers.

The Milwaukee and Rock River Canal Company have made all the necessary surveys and location of a canal, to connect the waters of Lake Michigan with those of Rock river; but owing to the difficulties relating to the sale of the lands granted by Congress to aid in its construction, this Company have only been able to finish about one mile of canal, near its eastern termination. Fortunately, however, this portion of the work creates a very valuable water power, from which much benefit will accrue to the country, even should no further progress ever be made in the construction of the canal.

The great object which it is most desirable to attain by works of internal improvement in Wisconsin, is the transportation of the fifty-five millions of pounds of lead, copper, and shot, produced in the mines in the western part of the

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Territory and adjacent portions of Iowa and Illinois to the shore of Lake Michigan, and the supply of that "Mineral District" with merchandize by way of the "Great Lakes." This, and the transportation of the surplus agricultural products of the intermediate country to market, and the supply of goods to the interior population, it is believed can be best accomplished by means of a railroad from Milwaukee to the Mississippi river, a work entirely practicable. The two great obstacles at present in the way of the construction of this work are the difficulty of deciding upon the points at which it shall terminate, and through which it shall pass—and the want of adequate funds. For the want of this improvement the products of the mineral country have been transported to the Mississippi river, and from thence by way of New Orleans and New York back to Milwaukee, within one hundred and fifty miles from where it was originally produced. It is calculated by intelligent persons, that in this way the citizens of the mineral country have actually lost in useless transportation of their products, a sum which would be sufficient to construct this railroad; for all expenses incurred in bringing articles to market are but so much reduction of their value to the producers. The reduction of the tolls on the Erie canal of New York, so promptly made by that State at the request of Wisconsin, is only of very limited benefit to us, so long as lead has to be brought in waggons from the mining country to the lake shore.

It is known from the surveys made for the Milwaukee and Rock River Canal, that there is no difficulty in the way of the construction of this work as far as Rock river, with gentle grades and curves; and it is believed that by following the "dividing ridge" between the Wisconsin river and the streams running south into the Mississippi, there will be found but little difficulty on the entire route.

The cost of transportation of lead by waggons, from Mineral Point to Milwaukee, in the summer, when the

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drivers can sleep in their waggons, and their cattle can find an abundance of feed on the open prairie, is about fifty cents per hundred pounds. At other seasons it varies from fifty cents to one dollar per hundred pounds. At this lowest rate the fifty-five millions of pounds, if transported on a railroad, would yield an income of two hundred and seventy-five thousand dollars per annum, which would be sufficient to pay the whole cost of the road in a few years. But if we take into the account the increase of business consequent upon this improvement, the merchandize that would be carried from Milwaukee to the mineral country, the agricultural and other products that would be transported on the road, and the toll derived from passengers, we cannot resist the belief that this project is one that must soon attract the attention of capitalists, even if the people of Wisconsin should not exert themselves much to accomplish so desirable an improvement.

To bring the lead, copper, and shot, by way of the lakes, is an object of importance not only to Wisconsin, but to all the States bordering on the lakes—and even the New England States will derive a share of the benefits, in the diminished prices which they will have to pay for these necessary articles. Will they not, then, assist us in accomplishing this object?

Other portions of the Territory are endeavoring to secure this lead trade, and wherever it is brought to the shore of the lake, the magnitude of the trade will be such as to afford business for a great number of inhabitants, and thus be the means of building up a town.

Besides the railroad it is proposed to improve the navigation of the Wisconsin and Neenah rivers, so as to secure the trade to Green Bay, and efforts are now making to obtain an appropriation by Congress to accomplish this important work. The estimated expense of this improvement, as made by Capt. Cram, is as follows:

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At Des Pères	$ 20,306 79
" Rapide de Croche	19,062 29
" Grand Kakalin	107,574 85
" Little Chute	99,693 60
" Grand Chute	82,386 74
" Winnebago Rapids	23,748 50
Between mouth of Wolf river and Fort Winnebago	6,230 50
At the Portage	64,085 81
Superintendence and contingencies	25,385 10
Total	$448,470 18

This is but a very small sum, compared to the magnitude and importance of the work.

The following table of the altitude of places in Wisconsin, above the surface of Lake Michigan, may be useful in making future surveys for canals, railroads, or other public works, and also in making a geological survey. They were ascertained by actual levelling by the author, except where otherwise stated. To find the elevation of any of these places above the ocean, we have only to add the elevation of that lake which is 578 feet, to the altitudes here given. Fractional parts of a foot are omitted :

	Feet.
Milwaukee river, at head of rapids	37
Menomonee, at Ross' mill	33
" at crossing of U. S. road	61
" near the Forks	115
" at Verbryck's mill	144
Big Meadow, in Town 7, Range 20	252
Poplar Creek, on old Prairieville road	240
Hills, between Poplar Creek and Prairieville	329
Pewaukee Lake (before it was raised),	263
Pishtaka river, at foot of Prairieville rapids	211
" " at Elgin, Ill. (Mr. Gooding's report	115
Pewaukee summit (Milwaukee and R. R. canal)	316
Nagowicka Lake	304
Nemahbin Lake	289
Crooked Lake	288
North Twin (Nashotah)	290
Cranberry Lake	269

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Silver Lake	278
Oconomewoc Lake	282
La Belle Lake	273
Rock river, opposite La Belle Lake	257
" " at Jefferson	186
Hill at west end of Pewaukee Lake	393

The following altitudes are estimated, from levels taken by Capt. Cram, at the rapids on several rivers, and an allowance made for the descent between them. They are supposed to be nearly correct:

	Feet.
Rock river, at its source	316
" " at mouth of Catfish	163
Rock river at State line (Beloit)	128
Fourth Lake, in Dane county	210
Lake Winnebago	160
Summit between Lake Winnebago and Plum creek (85.5 above Lake Winnebago)	245
Marsh at the head of north branch of the Manitowoc river (68 feet above Lake Winnebago)	228
Wisconsin portage	223
Wisconsin river at Helena	170
Blue Mound (1000 feet above Helena)	1170

The following list of elevations is made from the Report of Mr. Nicollet, except the last four which were reported by Captain Cram. They were ascertained by means of the barometer, and are probably very nearly correct:

Surface of the Mississippi	Feet
At Rock Island, mouth of Rock river (below Lake Michigan),	50
" Prairie du Chien (above Lake Michigan),	64
" Mouth of Sappah or Black river,	105
" Lake Pepin,	136
" Mouth of the St. Croix,	151
" Mouth of the St. Peter's,	166
" Mouth of Waberia or Swan river,	511
" Mouth of Crow Wing river,	552
" Mouth of Pine river,	598
" Mouth of Sandy Lake river,	675

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At Mouth of Swan river,	712
" Kabekons or Little Falls,	762
" Mouth of Leach Lake river,	778
" Cass Lake,	824
" Lac Travers,	878
" Itasca Lake,	997
Bluffs, east of Prairie du Chien	432
Dividing ridge between Sappah or Black river and the Prairie la Crosse river, six miles east of the Mississippi,	525
Uplands at mouth of the St. Croix river,	288
Grand Portage, St. Louis river,	488
East Savannah river, at mouth,	686
Divide between East and West Savannah rivers,	756
Portage between St. Croix and Bulé rivers,	378
Porcupine hills, near Lake Superior,	1032
Head of Montreal river,	822
Front Lake,	961
Lac Vieux Desert	951
Lake Superior,	18

The following table of the latitude north, and longitude west, from Greenwich, of places within this Territory, is given here in this form, as affording greater convenience of reference than if given under the head of the several places. The observations were made by officers of the United States—principally by Mr. Nicollet. That they are not in all cases precisely accurate, is shown by the difference of the observations of different persons at the same places; as at Prairie du Chien (Fort Crawford) and the mouth of the Montreal river:

Places.	Latitude.	Longitude.
ON THE MISSISSIPPI RIVER.		
Fort Crawford	43° 03′ 31″	90° 52′ 30″
Prairie du Chien,	43 03 06	91 09 19.5
Island at mouth of Upper Iowa,	43 29 26	91 10 00
Hokah (Root) river	43 47 00	91 11 30
Prairie la Crosse	43 49 00	91 14 00
Sappah (Black) river (opposite old mouth),	43 57 14	91 24 00
Mount Trampaleu,	44 01 07	91 30 30

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Kawakomick, or Clear Water river, .	45°	24′	25″	94°	07′	30″
Round Island at the lower end of Osakis rapids, ...	45	35	00	94	12	00
Osakis river, at mouth, ...	45	35	35	94	12	00
Watab river, ...	45	37	00	94	14	30
Pekushino river, ...	45	46	50	94	18	30
Wabezi (Swan) river, 2½ miles above the mouth, ...	45	54	30	94	22	00
Omoskos, or Elk river, . .	46	04	00	94	16	00
Nokays river, -	46	10	30	94	18	45
Kagi-wigwam (Crow Wing) river,	46	16	50	94	22	45
Nagapjika river (opposite mouth), .	46	26	00			
Pine river, ...	46	35	00			
Willow river, ...	46	40	30	93	22	30
Sandy Lake river, ...	46	47	10	93	09	30
Swan river, ...	47	00	43	93	09	00
Kabikons (Little) Falls, at head, .	47	14	50	93	26	45
Wanomon (Vermillion) river, .	47	11	04	93	32	30
Eagle's Nest, or Savannah, . .	47	18	10	93	39	00
Leach Lake river, at mouth, .	47	14	00	93	43	00
Cass Lake, ...	47	42	40			
Cass Lake (old trading house on a tongue of land near the entrance of the Mississippi), . . .	47	25	23	94	34	00
Pemidji Lake (Lac Travers) at entrance of the Mississippi, . . .	47	28	46	94	50	30
Itasca Lake (Schoolcraft Island), .	47	13	35	45	02	00
do	47	10	00	97	54	00
ON LAKE SUPERIOR, &c.						
Trading Post near mouth of the Pigeon river, ...	47	58	00	89	52	00
Lapointe (old trading house at Madaline Island), ...	46	47	10	90	53	30
do	46	44	31			
Mouth of Montreal river, . .	46	41	19			
do.	46	33	00.5	90	44	30
Head of Montreal river, . .	46	18	18	90	24	38
Trout Lake, ...	46	04	02	89	54	07
Lake Katakittekon (S. Island) .	46	07	31	89	20	13
Lac Brule, ...	46	00	46	89	10	32

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Mouth of Menomonee river,	45 17 16.4	87 27 21
Racine,	42 49 33	87 40 22
St. Louis river at Fond du Lac (24 miles above Lake),	46 39 50	94 15 20
Head of Long Rapids, on the St. Louis river,	46 49 42	96 25 00
Head Kettle Rapids (St. Croix river),	45 54 40	
Falls of the St. Croix,	45 30 10	92 40 00
Sandy Island (Lake of the Woods)	48 56 04	
Mouth of Rainy Lake river,	48 53 40	94 21 15
Island in Rainy Lake,	48 35 35	
Lower Portage of St. Croix,	48 14 05	
Fort Winnebago,	43 35 00	89 30 00
Fort Howard (Green Bay),	44 40 00	87 00 00

The reader will not, of course, expect much information relative to the geological character of a country so recently brought into notice, a large part of which is still uninhabited by civilized man; and all that can be attempted is a brief outline. Several geologists have travelled hastily through the country, mostly in small canoes along the principal rivers and lakes, and have published accounts of their necessarily limited and hasty observations. Among them are Mr. Schoolcraft, Mr. Keating (who was attached to Long's expedition), Mr. Featherstonhaugh, United States geologist; and more recently, Mr. James Hall, one of the geologists of the State of New York, I. H. Nicollet, H. King, and J. P. Hodge.

In 1839, a very minute and elaborate geological survey was made, under the authority of Congress, by Dr. D. D. Owen, and Dr. John Locke, of the "mineral region" in this Territory, as well as in Iowa and Illinois; but as their report has never been fully given to the public, the results of this survey are but little known.

The Territory may very naturally be divided into four geological districts, differing very materially from each other in physical character, dependent upon the rocks prevailing in each. They will be demonstrated, 1st, the

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Primitive; 2d, the Sandstone; 3d, the Mineral; and 4th, the Limestone Districts.

I. So far as is at present known, all the northern portion of the Territory, extending down the Mississippi nearly to the Falls of St. Anthony, thence across to the Falls of the rivers St. Croix, Black and Wisconsin, and thence to Lake Superior, along the course of the Chocolate river in Michigan, may be considered as PRIMITIVE, or abounding in primitive rocks. They are mostly granite and hornblende rocks, but the other varieties of rocks belonging to this class are also found, as is evinced by the following list of the localities observed by the geologists who have visited this region. The only rock other than primitive in this district, is the "old red sandstone," one of the oldest of the transition rocks. Red-rock Island, in the Lake of the Woods, derives its name from a red GRANITE rock, of which it is composed. Granite is also one of the most common of the boulders scattered over the Territory. Most of the islands in that lake, and Rainy Lake, which is similar to it in general character, consist of MICA SLATE, the vertical layers of which are constantly decaying and falling into the water. TALCOSE ROCK is said to be found on the Mississippi, at the Little Falls; and as this is the only rock in which gold occurs in the United States, it may be important to examine this locality with care. HORNBLENDE ROCK is found at many of the rapids on the Upper Mississippi; and it constitutes that rough, high, broken promontory extending into Lake Superior between the bays of Fond du Lac and Chegoipegan, called the Detour. A large proportion of the boulders contain more or less hornblende in their composition. Some of the rocky islands of the Lake of the Woods, and of Rainy Lake, are composed of SIENITE, which also occasions the falls at the outlet of the latter, where the water falls into the river over a ledge twenty-five feet high. ARGILLITE is found at the "Portage aux Coteau," on the St. Louis river; the sharp edges of

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its vertical layers occasion much inconvenience in passing the portage. SERPENTINE is found in small masses on Lake Superior, containing grains of native copper. It is also said to be found in connection with the celebrated copper rock from the Ontonagon river, now in the cabinet of the National Institute at Washington. To discover the locality of this rock in its native beds, then, becomes an important desideratum. According to Cleveland, Serpentine is associated with primitive and transition rocks, and exists in beds in gneiss, mica-slate, and argillite; so that in any part of the primitive district of our Territory we may expect to find it. GRANULAR QUARTZ constitutes the Falls of Pickagama, on the Mississippi; and GREENSTONE, having sometimes a columnar structure, is found on the St. Croix river, commencing twenty-four miles above the lake, and constituting the rocky glen at the Falls.

The mineral district of Lake Superior, which is now beginning to attract so much attention, lies mostly in Michigan, between the Montreal river and Kewena Point; and, therefore, does not properly require a description here. Its geological character is entirely different from the Wisconsin lead and copper district. But the trap dykes with which the veins of copper ore are more or less associated, are known to extend northward to the Menomonee and Wisconsin rivers; and hence it is supposed that copper may hereafter be discovered in all the intermediate country from Lake Superior to the region of lead and copper mines south of the Wisconsin river. Some recent discoveries of copper on the Menomonee, the Baraboo, and Kickapoo rivers seem to favor this supposition. At La Pointe, also, the same formations exist; and future explorations may develope valuable mines in that vicinity.

II. The country next to the Primitive district, extending along the Mississippi from the Falls of St. Anthony to the borders of the Mineral district, a short distance south of the Wisconsin river, and extending up the branches of

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the Mississippi to their respective falls, is composed of SANDSTONE, resting upon, and surmounted by limestone. In many places only one of these rocks exists, the others being below the deepest valleys, or have been carried away or destroyed by some unknown cause. The sandstone is mostly pure, and "white as the driven snow"—resembling white sugar in appearance, but is occasionally colored by iron rust with red, orange, or dark tints: at other times it is yellowish, and has been compared to the finer varieties of Muscovado sugar. These colors are frequently arranged in stripes or bands. It is soft and easily crumbles—so soft, says Featherstonhaugh, that the swallows, in great numbers, have been able to pick holes in it, on the Wisconsin river, to build their nests. The grains appear to be perfect quartz crystals, and not beach sand smoothed and ground by the action of water and then hardened into rock. This pure sand must ere long become the material for the manufacture of glass. The sandstone is sixty feet in thickness at the Falls of St. Anthony, and about the same at Prairie du Chien; but along the Wisconsin Hills it attains a thickness of over two hundred feet. The cliffs along the Mississippi, for a distance of thirty-five miles below the Falls of St. Anthony, appear to be composed chiefly of this crumbling sandstone. Large blocks are occasionally undermined and fall down, lying in confused heaps at the base of the bluffs. The rivers running through the district where this sandstone prevails, are characterized by shallow water, filled with moving sand, forming bars, that are constantly carried away from some points, and accumulated at others, rendering the navigation difficult. By far the larger proportion of the river bluffs along the Mississippi are calcareous, and present high perpendicular rocky fronts towards the river, supported by immense quantities of broken fragments at the base, extending usually half way to the summit. They are said to attain their greatest elevation in the vicinity of Lake Pepin. The limestone which lies above

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the sandstone in Wisconsin, was found by Dr. Locke to be the same that he had described in Ohio as the "blue limestone," and which constitutes the hills surrounding the city of Cincinnati. It is considered by most geologists as the equivalent of the "Trenton limestone" of the New York geologists; but Mr. Hall thinks it belongs to a more recent period. All the rocks of this district are referable to the "Champlain division," which is the first or oldest of the transition rocks in the United States.

III. The third Geological district is that known (and very properly) as the "MINERAL COUNTRY," the word mineral being used here to denote an ore of some useful metal. The lead-bearing rock is a loose, porous, yellowish limestone, resting upon the "blue limestone," and is deemed equivalent to the "cliff limestone" of Dr. Locke of Ohio, and the "Niagara limestone" of the New York geologists. It is therefore the GEODIFEROUS LIMESTONE of the late Prof. Eaton, a name which ought to be restored, as having been first applied to this rock, and being at least as free from objections as either of the others. Above the geodiferous or lead-bearing rock, we find in this district the cornitiferous rock of Eaton, constituting the "mounds," throughout the mineral district, and known by the quantities of chert or flint, or "quartz formation," which it contains. The boundaries of this district, according to Dr. Owen, run nearly parallel with, and a few miles south of Wisconsin, from the Mississippi to the Blue Mounds, and thence down the Sugar river nearly to the south line of the Territory, where it diverges suddenly to the west and crosses that line near the Peckatonica. It embraces about sixty-two townships, constituting by far the larger proportion of the lead district of the Upper Mississippi; as the extent of country from which this mineral is obtained in Illinois is only ten townships, and in Iowa Territory only eight. The surface rock in this district being limestone, and the face of the country not being mountainous, as is usually the case in mining

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countries, we find that the lands about our lead mines are as valuable for agricultural purposes as almost any other in the west, thus affording this district advantages not to be found in combination elsewhere; for, except in this case, the country which is valuable for its mines, is good for nothing in the eyes of an agriculturist. The theoretical geologist will find a hard problem to solve in his endeavor to account for the almost total absence of those boulders of primitive rock in the mineral district, which are so abundant elsewhere in the Territory.

In Silliman's Journal of Science and Arts for July, 1842, is an article by James P. Hodge, "on the Wisconsin and Missouri Lead Region," which contains the most correct account that has recently been published of the manner in which the lead is found in the rock; the general character of the mineral country, &c.; it is therefore hoped that no apology is necessary for introducing here the following extract:

"Though the 'cliff' (Geodiferous) limestone, the formation that contains the lead ore, occupies a greater extent of country, it is in this portion only that circumstances seem to have been favorable for the production of fissures containing the ore. Its strata appear uniformly horizontal, until, by tracing them some miles, a prevailing dip to the south is discovered. The lead region is a rolling, hilly country, the hills sometimes covered with an open growth of oak, but as often entirely free from timber, and clothed with the tall prairie grass only. The summits maintain a general level, except where it is broken by the 'natural mounds' (the two Blue Mounds, the Platte Mounds, Sinsinawa Mounds, &c.), which rise several hundred feet above it. In these the limestone appears more siliceous than is noticed elsewhere, and its superior hardness may in part have been the cause of these mounds remaining like monuments of the devastating currents that must have given the surface around its present form; while the huge

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blocks, tipped out of their horizontal position, lie on the steep sides, as additional evidence of the wasting waters.

"Throughout the extensive tract defined as the lead region, lead ore may be sought for with prospect of success, on every township, and on almost every square mile. And, fortunately, it is so well watered, and the little streams have so rapid a fall, that power for furnaces may almost always be obtained near the mines. New discoveries are continually made, and with every one, further light is thrown upon the true character of the ranges of fissures containing the lead and copper ores, by which results they can be traced with greater certainty from one tract to another, without depending entirely on the present imperfect mode of 'prospecting.'

"Beneath the cliff limestone is a thin stratum of blue limestone, and this rests on a body of brown sandstone. As one goes from the southern townships of Wisconsin towards the north, this blue limestone is observed to become higher and higher in the hills, and the lead diggings to be everywhere above it. Though the sandstone rocks come out in bold bluffs on the sides of the hills, no veins of ore are ever found in them; but in the cliff limestone above they are found, though the rock and its fissures lie hid under a great depth of soil.

"These fissures are of every degree of width, from fifty feet down to thin cracks; all of them do not contain ore; the large chambers, when they have any mineral in them, are lined on the walls with a coating of lead ore, seldom over a foot thick, while the interior is filled with clay. Sometimes across the crevices run horizontal layers of galena; and again it occurs in loose 'chunks' in the clay of the fissures, or of the soil above, and again it runs in a vertical sheet down, or still again filling narrow fissures in the appearance of a vein and of a bed in the solid rock. But lead is not the only ore these fissures contain. Mixed with it in every proportion, and even sometimes getting the bet-

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ter of the galena, and shutting it out completely, occur both the carbonate and sulphuret of zinc; the one known to the miner by the name of 'dry bone,' the other 'black Jack.' From the abundance of the carbonate of zinc, and its being an ore that, when clear, yields about sixty per cent. of the oxide, it seems probable that it will some time become an object of importance; now it is considered a great obstruction whenever met with, and the galena, when mixed with much of the zinc ore, brings an inferior price.

"The direction of the fissures downwards is as variable as their size and shape. They run like cracks through a rock—sometimes vertically, sometimes inclined, and sometimes horizontally between the strata. But in all cases on reaching the sandstone, they are, as far as is yet known, unproductive. They are found when they are followed to yield three inches of galena, that being the least vein it is thought worth while to pursue through rock, and it is very rare indeed that a continuous vein is found exceeding one foot in thickness. The horizontal direction of fissures is more uniform; those producing the most ore almost universally running nearly east and west. Near Mineral Point some fissures running north and south produce good ore, but they are for the most part horizontal beds (of limited width) between the strata, and out of these directions it is rare to find a productive fissure. The smelters think they can distinguish the ores that are found in different fissures—that from an east and west fissure being perfectly crystallized, of a smooth surface, striæ indistinct; that from a north and south fissure, of crystalline structure, with two sets of striæ very distinct, crossing each other at right angles; and the ore from a quartering fissure crystalline with many sets of striæ crossing each other obliquely; and to some extent I had an opportunity of proving their observations correct. The fissures appear to be limited in length to within a few hundred feet, and to lie in ranges, which extend at right angles with the direction of the fissures. In the neighbor-

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hood of Mineral Point, many of these fissures are opened and mined, and the 'diggings' are seen to extend, with little irregularity, in a north and south belt, that part to the west producing lead ore ; half a mile to the east the fissures containing copper ore, and still further east, a mile or more, hematite iron ore abounds in them.

"The deepest shafts that have been sunk in these fissures, are about ninety feet; and at Mineral Point they may be worked to that depth without the water being troublesome. But as these deep shafts are sunk on the highest ground, the bottom of them hardly reaches the sandstone.

"The copper ore is similarly situated to the lead ores, either in wide fissures or in thin veins running through the rock. As many as four of the little veins, not exceeding two inches in thickness, have been found running east and west on different parts of the mining ground. The ore in these is a mixture of the sulphuret and carbonate. Besides these, which are not considered important, there is a large fissure, in places fourteen feet wide, that has been traced about a quarter of a mile. It is on the old Ansley tract, and extends in a westerly direction towards Mineral Point. For about the depth of fifteen feet, the fissure was found to be filled with an iron ochreous substance named 'gossan,' and lumps of sulphuret and carbonate of copper mixed in it. Below this depth is clay, with a little ore scattered through it. The lumps above were of all sizes, up to two hundred pounds weight. No shafts were ever sunk to prove this fissure at greater depths; but there is every reason to suppose that it will be found productive in other parts, besides the strip near the surface. The little rock veins prove that the ore belongs to the formation as much as the lead ores, and in whatever way it may have been brought up from below, it is likely to have formed other deposits in the fissure worth looking after.

"It is difficult to form any correct judgment concerning the per centage of these ores, particularly the gossan, for

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they are continually changing their relative proportions of copper, iron and clay, so that a few analyses would not decide the matter. According to the report of Dr. Owen, three average specimens of the lump ore yielded respectively, 23, 24⅛, and 35.7 per cent. of copper; and in the same report, he says that the gossan yields, by analysis, from six to nine per cent. of pure copper.

"Other discoveries of copper ore have been made in the Territory, though none of them have yet been proved important. I saw ore of good quality from the Blue river country, and visited a mine, a thin rock vein, near the Peckatonica, about five miles north of the Illinois line. In this neighborhood I discovered some fine clay, apparently of excellent quality, which may be of no little importance in making fire brick for linings for the furnaces. It is an alluvial bed, six feet thick, at Winslow, on the Peckatonica, where it crosses the State line."

IV. The next and last Geological district, into which this Territory may be naturally divided, should be called the LIMESTONE DISTRICT, as it is composed almost exclusively of limestone rock, and extends from Lake Michigan west, to the other districts mentioned. This same great deposit of calcareous rock extends south into Illinois, where it dips under the rocks of the "coal formation," and north it continues along the lake shore as far as Mackina. It generally occurs in thin, compact layers or strata, disposed horizontally, or nearly so, of a light grey color, and affording very pure lime when burned. At other places it is of a dirty yellow color, filled with minute pores, and easily decomposed, when exposed to the air and weather. It is very sparingly supplied with organic remains or petrifactions, but such as are found, indicate this deposit to be the "carboniferous limestone" of the older geologists,* which forms the

* It is probable that this great limestone deposit will be found, upon further examination, to belong to different formations or eras; all, however, below, or older than the coal measures.

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basis on which rests the coal-bearing rocks. It appears then, from these facts, that we may not hope to add coal to the other sources of mineral wealth with which a kind Providence has so abundantly supplied us. There appears to be a tendency in this rock to assume the form of irregular and moderately elevated ridges extending throughout its whole length, in a general northeast and southwest direction, or parallel to all the geological formations of the western country. It contains disseminated masses of sulphuret of zinc, and iron pyrites—the latter at some places in great abundance. Cavities are also found filled with bitumen, resembling the petroleum or Seneca oil; but there are no localities known from which this substance can be obtained in any considerable quantities. It contains also some beds of gypsum, or plaster of Paris, which upon further exploration, it is believed, may prove to be valuable. It is often reported that water limestone exists in Wisconsin, but the truth of such reports is not yet known. The horizontal layers afford an excellent building material, and would answer admirably for pavements, hearth-stones, &c. &c. It occasionally is found with sufficient firmness of texture to receive a high polish; and is then called marble. There are occasionally some indications of copper ore in this limestone, but not sufficient to induce the belief that it may exist in such abundance as to be of economical value.

Governor Dodge, in his message to the legislature, in December, 1840, recommended that measures be taken to procure a geological survey of the Territory, and a bill was introduced by Mr. Janes, but was postponed, on account, mainly, of the great expense which it would require at a time when the resources of the Territory were extremely limited. It is believed, however, that this very desirable work may be accomplished, by the employment of only one geologist, and allowing ample time for its completion; thus making the annual expense so small as to be entirely within the means of the Territory. In this way, the most impor-

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tant localities being first examined, the whole may be accomplished in a few years, and a very great amount of useful information collected relative to the hidden riches of our soil.

The following is an enumeration of the minerals heretofore found in this Territory, so far as they are known to the author; but it undoubtedly falls very far short of the actual number. So large a portion of our Territory has never been visited by any mineralogist, that we may not be surprised to learn hereafter of the existence of many rare and valuable minerals not now known to exist here.

Sulphuretted Hydrogen.—Several sulphur springs have been noted by the surveyors of the public lands, which are probably springs whose waters are impregnated with this gas.

Bitumen occurs in small cavities in the limestone along the shore of Lake Michigan, both liquid and solid. The liquid variety, known as petroleum, or Seneca oil, has not, however, been found in sufficient quantity to be collected for medicinal purposes. It appears to result from the animal matter of the petrifactions found in the rock.

Graphite, or black lead, was found by Schoolcraft, at the Grand Portage, on the St. Louis river. It was, however, of inferior quality: it formed a vein between the vertical layers of argillite.

Coal.—Small fragments of coal, associated with bituminous shale, or coal slate, have been found on the shore of Lake Michigan, at Milwaukee and elsewhere; and some indications of coal are said to exist in the vicinity of Lake Winnebago. The rocks in Wisconsin, so far as they have been examined, prove (as before mentioned) to be older than the coal formation, and lie below it; consequently it would be useless to search for coal in these rocks.

Peat is found in great abundance, in bogs throughout the Territory. It is occasionally used for fuel here, by

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persons who have been accustomed to its use in other countries.

Common Salt.—But few indications of salt have yet been discovered. The surveyors have noted "salt licks" at some places, but they have led to no important results. In Long's expedition, we have an account of a salt district near the northwest corner of this Territory, and the country adjacent. "There are doubtless, in this country, a great many salt springs, especially below the Red Fork; we saw none, but we were informed that fine springs existed on Big and Little Saline rivers, on the 'Two Rivers,' &c., where the salt is found in white efflorescences, so as to be annually collected there by the colonists of Pembina; notwithstanding which, at that settlement the price of this article is from four to six dollars per barrel, weighing eighty pounds. One of the residents on this river cleared five hundred dollars in one winter, by the salt which he collected. Probably by boring to a small depth, abundant springs would be obtained." In this remote region, however, salt would possess little value, beyond what is necessary to supply the inhabitants in its immediate vicinity; especially as no direct communication by navigable rivers exists between that country and the great markets of the world.

Sulphate of Barytes, or Heavy Spar, is said to occur in narrow seams in boulders or fragments of limestone on the Wisconsin river.

Calcareous spar is abundant at the lead mines, where it is called "Tiff." It occurs in the limestone on the Neenah, and various other places; also at the Grand Portage, on the St. Louis river, in perfectly transparent rhombs, exhibiting the phenomenon of double refraction.

Marble, or limestone having the requisite qualities for being polished, and hence useful for many kinds of ornamental work, is found in various places. Very beautiful grave-stones are manufactured from stone quarried in the

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town of Genesee, in Milwaukee county. The "blue limestone," in some places, makes a very beautiful marble, the shells and corals giving it a peculiarly fine character—hence called "shell marble."

STALACTITES are found in limestone caverns near Dubuque, on the Mississippi river.

CALCAREOUS TUFA, incrusting moss, leaves, &c., near Milwaukee, on the canal; in the gorge below the Falls of St. Anthony; at the mouth of the Bois Brule, and probably at many other places.

SEPTARIA.—In the reddish brown clay soil along the shore of Lake Superior, between the Montreal river and La Pointe.

GYPSUM, or plaster of Paris, is found in small masses in the sand rock on Lake Superior; and also at Sturgeon Bay, in Brown county. At this last locality, it is believed that beds of sufficient extent to be of workable value might, by proper explorations by competent persons, be found. It has a fine flesh color, and appears to be quite pure.

QUARTZ is very common. Fine specimens are occasionally found on the shores of the lakes and rivers. In the "mineral country" it occurs in geodes and in mamillary form. It is here called "lead blossom," and is one of the indications of the existence of lead ore. Several of the numerous varieties have been noticed—as *milky quartz*, on the pine ridges of the Upper Mississippi; *radiated quartz*, on Lake Pepin; *granular quartz*, at the Falls of Pickagama; *ferruginous quartz*, at Sandy Lake, and on the dry pine ridges in that vicinity; *hornstone*, or *chert*, very abundant at the Blue Mounds, and other places in the lead mine region; *chalcedony*, on the shore of Lake Superior, on the Mississippi, &c., &c.; *carnelian*, found among the pebbles on the margin of lakes and rivers—very abundant about Lake Pepin, &c.; *Jasper* is usually found with carnelian; also *agate*, and agatized wood, on the Mississippi.

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HORNBLENDE is common in the primitive rocks, and in boulders scattered over the transition country.

GARNETS are occasionally found in the primitive district.

FELDSPAR, being one of the constituent minerals of granite, hornblende rock, &c., is found almost everywhere in the Territory.

TOURMALINE, on an island in Little Sturgeon Lake, near the northwest part of the Territory, in granite rock. It is in beautiful crystals, intensely black, and about an inch long. Also at the outlet of Lac de Flambeau, and various other places in detached rocks or boulders.

KYANITE, in the primitive rocks at the outlet of Lac de Flambeau, or Torch Lake.

MICA is one of the essential constituents of granite and mica slate, which are abundant throughout the Territory, either *in situ* or in boulders.

BITUMINOUS SHALE, in fragments, accompanying coal, on the shore of Lake Michigan.

RED PIPERSTONE (or Catlinite) similar to that from the Coteau de Prairie, is found on the banks of Otter Lake, near the source of the Mauvaise river. This stone is soft and easily cut when first taken from the quarries, but soon becomes hard, and receives a fine polish when exposed to the air. It is much used by the Indians in making tobacco pipes and various ornaments.

CLAY is very common, but none has been discovered suitable for porcelain or the finer wares. It is much used in the manufacture of brick, and the coarser kinds of pottery. It is often so filled with pebbles of limestone as to render it unfit for brick, as these expand when brought into contact with water after being burned, and burst the brick into fragments. The brick have a light yellowish-grey color, and buildings made from them have a fine appearance without the addition of paint.

MAGNETIC OXIDE OF IRON.—A boulder, consisting al-

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most entirely of this ore, has been found near Milwaukee; it had been cracked and broken by the action of the weather. The black sand so abundant on the shores of all the Great Lakes, is the magnetic iron ore reduced to powder, or sand, by the action of the waves. Near Sheboygan, and at various other points, it exists in large quantities; and the people of Milwaukee supply themselves with this article from the lake shore in the vicinity of the town. Near the mouth of the Bois Brule river, on Lake Superior, we are informed by Mr. Schoolcraft, that there is a layer a foot in thickness, extending along the shore of the lake some distance. This sand is thrown upon the beach by the force of the waves, especially during heavy storms of wind, and its great specific gravity prevents its being carried back by the diminished force of the returning waves.

According to Mr. Bronson, there are near the Black River Falls "several natural mounds from one hundred to three hundred feet high, apparently composed entirely of *iron stone ore.*" As to the mineral character and economical value of this ore, that appears to exist here in such abundance, we are not informed.

Limonite, or brown hematite iron ore, is found a mile or more east from Mineral Point, associated with copper ore. Fragments of this ore have also been found on the ridges near Rock river, and on Sugar river, in Green county, but nothing is known of the quantity of ore to be found at these places.

Iron Pyrites, or sulphuret of iron, is found abundantly in the limestone, along the shore of Lake Michigan, and in rolled masses on the beach. Fine specimens are dug from the hard blue and yellow clay forming the lake shore at Milwaukee. It is associated with the copper ore at Mineral Point, in considerable quantities. The people of Wisconsin, like those of many other countries, have been deceived by the bright golden, or bronze yellow color of this almost worthless mineral into the belief that they had made

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a valuable discovery. It is used in the manufacture of copperas and sulphuric acid (oil of vitriol), and may be found here in sufficient quantities to be of value for these purposes.

Zinc Blende, or sulphuret of zinc, has been found in small masses, disseminated through limestone, at Milwaukee, and on the Neenah river. It is found abundantly in the mineral country, associated with the lead ore, in such quantities, in some instances, and so intimately blended with the lead as to materially injure its quality and value. It is called "black Jack," by the miners.

Carbonate of Zinc is also found associated in the same way with the lead in the mineral country, and is there known by the significant name of "dry bone." Furnaces have been recently erected by some enterprising individuals for the purpose of reducing this ore of zinc, and from its abundance in the mineral country we may anticipate much from this new source of wealth in Wisconsin.

Galena, or sulphuret of lead, exists in immense quantities in fissures in the "geodiferous limestone," in the counties of Grant, Iowa, Dane and Green. It is stated that about 798,000 pigs (of 70 pounds each), or 55,860,000 pounds of lead were shipped, during the year 1845, from Galena.

Carbonate of Lead, called "white mineral," is found at the Blue Mounds, and some other places among the mines. It is not found in sufficient quantities to be worked as an ore of lead.

Native Copper.—Fragments of native (or pure) copper have been often found in various parts of the Territory. A mass weighing over one hundred pounds is said to have been found at Green Bay. Mr. C. Trowbridge found on his farm, near Milwaukee, a piece weighing thirty pounds. Three specimens were found in excavating the canal in Milwaukee, in a gravel bank some ten or twelve feet below the surface of the ground, which together

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weighed about twenty pounds. One of these is now safely deposited in the Cabinet of Yale College, at New Haven. Numerous smaller specimens are occasionally found at Milwaukee, Racine, and other places. On the Mississippi they have been found as far up as the Falls of St. Anthony, and a mass is said to exist a little west of Lac Vieux Deserte, far exceeding, in magnitude, the celebrated "copper rock" from the Ontonagon. These fragments of copper have evidently been transported from their native beds, probably at Lake Superior, with the boulders of primitive and trappean rocks, and by the same cause. They are, therefore, not to be regarded as indicating the existence of copper mines where they may happen to be found. The native copper of Lake Superior, mostly within the limits of Michigan, is found in veins traversing trap, and the overlying conglomerates and sandstone rocks—and as the trap dykes are known to extend south into Wisconsin, we may expect to find similar veins. During the past year (1845), some valuable discoveries, it is said, have been made near the sources of the Montreal river of Green Bay.

SULPHURET OF COPPER, and CARBONATE OF COPPER.—These varieties are associated to constitute the copper ore found in a vein or fissure in the vicinity of Mineral Point, which is a mile or more in length, and at other places in the mineral country. This ore is accompanied by lead and iron pyrites. After many years' trial the proprietors of these mines have discovered a simple method of reducing these ores, and a large amount of copper is now annually produced from them. Much of this finds its way to Milwaukee, and is thence sent down the lakes to New York. Recently these ores have been discovered on the Kickapoo and Barraboo rivers north of the Wisconsin; but the extent and value of the veins have not yet been ascertained.

SILVER is found in minute proportion combined with the lead ore, so minute that it cannot be worked with advantage. Native silver is found associated with the copper at

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Eagle river, and it is also said to have been discovered in the vicinity of La Pointe, on Lake Superior.

For the scientific naturalist, the sportsman and the angler, Wisconsin affords a very interesting and highly attractive field. A large proportion of the quadrupeds of the United States have been found within her limits, and hence it would be easier to enumerate what are not found here, than to make a list of those that are. Of all the other classes of animals we have our due proportion. Several species of animals have already been compelled to leave Wisconsin by the approach of civilized men; and others are driven into the remote, unsettled portions, where they are probably destined to remain but a short time before they will, from the same cause, have to retire still further towards the "far west." The industrious beaver has left traces of its former existence on nearly every small brook; and horns of the elk are still occasionally found scattered over the prairies. The buffalo has but recently been driven beyond the Mississippi. As yet no bones or teeth of the extinct mammoth or mastodon have been discovered in Wisconsin. In the remote parts of the country, about the source of the Mississippi, and west of Lake Superior, several species have been found that are not found in the southern parts of the Territory. Among those occasionally seen are, according to Mr. Schoolcraft, the great white or polar bear, the arctic fox, with fur as white as the snow in which it lives; and also the moose, rein-deer and the antelope. The great white or northern owl, and three species of grouse, are found there,* different from the two that are so abundant in the woods and about the prairies at the south.† A great many species of ducks and other aquatic birds swarm our

*Tetrao Canadensis, Linn., spotted grouse.
phasianellus, Linn., sharp-tailed grouse.
saliceti, Temm. (T. albus Gmel.), willow grouse, or white partridge.

† The pheasant and prairie hen (T. umbellus and T. cupido).

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lakes and rivers. Pelicans occasionally ascend the Mississippi and its branches far into Wisconsin. Pigeons are abundant; quails, and a great variety of smaller birds, both useful and injurious to the interests of man, are found.

We have our due proportion of reptiles—lizards, turtles, frogs, snakes, &c. The rattlesnake is the only poisonous species.

Among the fish afforded by our lakes and rivers are white-fish, salmon, sturgeon, perch, bass, suckers, herring, pickerel or muskellonge, trout, catfish, sheep's head, lawyers, and many others, nearly all valuable as articles of food for man. They are caught in large quantities, and some are exported. The Indians at the north, where game is scarce and where agriculture has not yet been introduced, live almost exclusively upon fish, which are caught in vast quantities at the mouths of the rivers. The excellent qualities of these fish for the table are too well known to need description here.

Wisconsin abounds in plants of an interesting and useful character, embracing all varieties, from the stately pine tree, towering its head above the other trees of the forest, to the humblest "wild wood flower." The broad prairies are covered with a profusion of flowers of every form and hue—which are changed with every change of season. The eastern portion of the Territory abounds in "hard wood" timber—the northern, in forests of pine, and the central and western portions are comparatively destitute of trees. Here, however, are generally found a few trees, constituting the "oak openings," and affording sufficient wood and timber for the purposes of the first settlers.

The following is a list of plants which have not before been noticed as indigenous to Wisconsin. It exhibits the scientific name, its author, the common name (if there is any), and the locality at which the plant was found.

Ranunculus acris, Linn.,	*Butter cup* (introduced).
Actæa rubra, Big.,	*Red cohosh.*

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Polanisia graveolens, Raf.,	Beloit, Rock county.
Polygala incarnata, L.,	do. do.
" verticillata, L.,	Lisbon.
Elodea Virginica, Nutt.,	Milwaukee.
Arenaria serpyllifolia, L.,	Prairieville.
Stellaria media, Smith,	*Chickweed* (introduced).
Oxalis violacea, L.,	Rock county.
Negundo aceroides, Mœnch.,	*Box elder*, Rock river and Sugar river.
Staphylea trifolia, L.,	*Bladder nut*, Rock county.
Amorpha fruticosa, L.,	Beloit.
Lespedeza violacea, Pers.,	Prairieville and Beloit.
Œnothera chrysantha, Mx.,	Prairieville.
Ludwigia palustris, Ell.,	Root river.
Hippurus vulgaris, L.,	*Mare's tail*, Milwaukee.
Polytœnia Nuttallii, D. Cand.,	Prairieville.
Cornus alternifolia, L.,	*Yellow-twigged dog-wood*, Milwaukee to Sheboygan.
" stolonifera, Mx.,	*Red-twigged dog-wood*, Milwaukee.
" sericea, L.,	Milwaukee.
Lonicera cœrulea, L.,	do.
Viburnum lentago, L.,	do.
Cephalanthus occidentalis, L.,	*Button bush*, Milwaukee.
Kuhnea eupatorioides, L.,	Greenfield.
Aster multiflorus, Ait.,	Milwaukee to Rock river.
" miser, L.,	Milwaukee.
" prœaltus, Poir.,	do.
" prenanthoides, Muhl.,	do.
Solidago patula, Muhl.,	do.
" arguta, Ait.,	do.
" ulmifolia, Muhl.,	do.
" nemoralis, Ait.,	do.
Silphium perfoliatum, L.,	*Cup plant*, Prairieville.
" trifoliatum, L.,	do.
Echinacea angustifolia, D. Cand.,	Rock county.
Helianthus rigidus, Desf.,	Prairieville.
Coreopsis trichosperma, Mx.,	Milwaukee.
Artemesia biennis, Willd.,	do.

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Cacalia suaveolens, L.,	Milwaukee.
" reniformis, Mx.,	do.
Cirsium pumilum, Spreng.,	Prairieville.
Hieracium scabrum, Mx.,	Milwaukee.
Nabalus virgatus, D. Cand.,	
" racemosus, Hook,	Pewaukee.
Andromedia polyfolia, L.,	Muskego, also in Jefferson county.
" calyculata, L.,	Muskego.
Chimaphylla umbellata,	Saukville, Washington county.
Pyrola elliptica, Nutt.,	*Shin leaf*, Milwaukee.
" chlorantha, Swartz,	do.
Apocynum hypericifolium, Ait.,	Milwaukee and Racine counties.
Aceratus lanceolata, Ives,	Greenfield.
" (n. sp.),	Mequanigo and Prairieville.
Gentiana detonsa, Griseb.,	Milwaukee.
Phlox revoluta, Eaton,	Rochester, Racine co.
Pulmonaria Virginica, L.,	*Lungwort*, Beloit.
Hydrophyllum appendiculatum, Ait.,	*Water leaf*, Beloit.
Lycopus sinuatus, Ell.,	
Gerardia purpurea, L.,	Prairieville.
Verbena angustifolia, L.,	do.
Utricularia minor, Willd.,	*Bladder wort*, Milwaukee.
Euphorbia maculata, L.,	*Spotted spurge*, do.
Salix candida, Willd.,	
" Muhlenbergiana, Willd.,	
" discolor, Willd.,	*Common willow.*
" recurvata, Ph.,	
Quercus bicolor, Willd.,	*Swamp white oak*, Milwaukee.
" palustris, Mx.,	*Pin oak*, do.
Populus lævigatus, Ait,,	here called "*Balm of Gilead.*'
Callitriche vernalis, L.,	*Chickweed*, Milwaukee.
Pontedera cordata, L.,	*Pickerel-weed*, Salem, Racine co.
Habenaria leucophea, Nutt.,	Brookfield.
Trillium sessile, L.,	Wawatosa.
" recurvata, Beck,	Greenfield.

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Juncus Balticus, Willd.,		Milwaukee.
" acuminatus, Mx.,		do.
Smilax rotundifolia, L.,	*Green brier,*	do.
Potamogeton perfoliatus, L.,		do. river.
Scheuchzeria palustris, L.,		Gold Lake.
Dulichium spathaceum, Pers.,		Brookfield.
Cyperus strigosus, L.,		Milwaukee.
Eliocharis acicularis, Brown,		do.
Scirpus maritimus, L.,		do.
" eriophorum, Mx.,		do.
Eriophorum angustifolium, Richardson,		do.
Eriophorum vaginatum, L.,		Muskego.
Carex paniculata, L.,		Milwaukee.
" bromoides, Schk.,		Greenfield.
" pubescens, Muhl.,		Wawatosa.
" intumescens, Rudge,		Milwaukee.
" lupulina, Muhl.,		do.
" oligosperma, Mx.,		Muskego and Warren.

[The Carices are found in the wet, natural meadows, in great abundance, and are annually cut by the farmers for hay. They are thus highly important aids in the settlement of a new country, by enabling the early inhabitants to support their teams and stock before an artificial meadow can be prepared. Many of these natural meadows are occasioned by the dams of the beaver, still visible in every part of the Territory.]

Atheropogon apludoides, Muhl.,	Prairieville.
Aspidium Gouldiana, Hook,	
Osmunda regalis, L.,	Summit, also in Racine county.

The number of plants that have been detected and examined in the County of Milwaukee, without including mosses, and the lower orders of Cryptogamiæ, is..... 694
In adjoining counties, &c., besides the above,..... 97
In northern Wisconsin, besides the above (collected by Dr. Houghton and others),..... 82

Total number of species already detected,..... 873

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But as much of the county has not been visited by any botanist, we may fairly presume that this is far from being the actual number, and that Wisconsin is as rich in plants as other States in the same latitude.

From the observations made at the military posts within the Territory, we are able to form a pretty correct estimate of the climate of Wisconsin; and by comparison with the observations reported to the Regents of the University of the State of New York, we find a remarkable similarity between the climate of Wisconsin and that of the interior and western counties of that State. But as two of these military stations are much north of the most populous portions of Wisconsin, it is evident that the southern portions must have a climate rather warmer than New York; and this accords with the first impressions of most persons of intelligence and observation, who have had the opportunity of direct comparison. One person remarks that he passed the 23d, 24th, and 25th of June in the heart of the far famed Genesee country, and then not one of the farmers in a dozen had hoed his corn for the first time. On the third of July, he landed at Milwaukee, and along the road west from that place, corn was about "tasselling out," and was at least five weeks in advance of the same crop in western New York. Persons, therefore, who are familiar with the climate of New York, may form a pretty correct judgment of that of Wisconsin.

Our winters, usually long and severe, are occasionally mild and almost entirely without snow. The ground is frozen to a great depth, and the rivers and lakes are bridged over with solid ice. But usually snow falls in December and continues until March. The "January thaw" often carries off the snow, and occasionally dissolves the ice in the rivers. The winter of 1842-3 was distinguished by the unusual quantity of snow, and the great length of time it remained on the ground. Sleighing commenced about the tenth of November, and continued until about the same time in April, being five months.

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The following table, showing the day when the Milwaukee river was closed with ice each fall, and when the ice left in the spring, will serve to show the duration of our winters, and how they vary in different years:

Closed November 20, 1836.		Opened April 13, 1837—144 days.	
" " 25, 1837.		" March 25, 1838—121	"
" " 15, 1838.		" " 27, 1839—132	"
" " 21, 1839.		" " 6, 1840—106	"
" " 17, 1840.		" " 24, 1841—127	"
" " 25, 1841.		" " 9, 1842—104	"
" " 17, 1842.		" April 14, 1843—148	"
" December 1, 1843.		" March 10, 1844—100	"
" November 25, 1844.		" " 3, 1845— 98	"
" " 27, 1845.		" " 9, 1846—102	"
Mean, November 22.		March 26—118	"

The Great Lakes have a very sensible effect upon our climate, by equalizing the temperature—making the summers less hot and the winters less cold than they would otherwise be. Hence the difference between the mean temperature of winter and summer at Fort Snelling, on the Mississippi river, is about six and a half degrees more than at Fort Howard, at the southern extremity of Green Bay; and at this place the influence of the lakes is but partially felt. At Prairie du Chien (Fort Crawford) this difference is ten degrees more than at Milwaukee, on Lake Michigan, in the same latitude. About the same difference is observed when we compare the mean temperature of winter and spring at these places; the change from winter to spring being more sudden in the interior than on the lakes. This fact is also inferred from the vegetation of spring, for it has been ascertained by direct observation, that in the town of Lisbon, only fifteen miles from the lake at Milwaukee, the early spring flowers show themselves about ten days earlier than on the lake. In the spring, vegetation, in places remote from the lakes, shoots up in a very short time, and flowers begin to show their petals, while on the lake shore the

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cool air retards them and brings them more gradually into existence.

Another effect of the lakes is, as perhaps might be expected, to create a greater degree of humidity in the atmosphere, and hence a greater quantity of rain. This is also proved by comparing the observations at the two posts above referred to; there being annually about eight and a half inches more at Green Bay than on the Mississippi.* It is however remarkable, that these lakes do not afford more fogs than are found to exist about them. At Milwaukee, on the shore of Lake Michigan, not more than three or four foggy days occur in a whole year. Fogs are often seen lying on the surface of the lake itself, and steamboats and other vessels navigating Lake Michigan often experience inconvenience from them, but they appear to be dissipated upon approaching land.

More than two hundred days in each year are fair, taking one year with another; and if we add such as are not quite "fair," but only partially cloudy, it will be seen that we have an atmosphere of great purity and clearness. This is also proved by direct observation, for it is remarked by strangers that, owing to the clearness of the air, objects can be seen at a greater distance than usual, or *appear* to be near at hand, when in fact they are at a considerable distance.

That the citizens of Wisconsin have occasional opportunities of witnessing some of the more interesting and remarkable phenomena of nature, is shown by the following extract from the Southport Telegraph.

"WATER SPOUT.—The interesting phenomenon of the Water Spout was witnessed by quite a number of the citizens of this village, on the morning of Sunday, August

* The small amount of rain at Milwaukee, as shown in the following table, would seem not to confirm this statement; but the observations at that place were but for a limited period, and during unusually dry seasons.

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20, 1843. The attention of the beholders was first directed to a dense dark cloud hanging over Lake Michigan, distant, apparently, some ten or twelve miles in a southerly direction from this place. From this cloud was seen converging downwards a thick mass of vapor, trumpet-shaped, or in the form of a pyramid reversed; at the same time the surface of the water below appeared greatly agitated, bubbling, foaming, and rising up in hundreds of little sharp pyramids of various heights, until at length an aqueous cone rising upward, united with the descending one—forming a volume apparently some two hundred feet high, and exhibiting the form of two funnels united at the little ends; the point of uniting between the ascending and descending cone being much the smallest part of the column. In the middle of the column was seen what may be termed a transparent tube through which the water appeared to rush with a spiral motion, and with a velocity truly wonderful. Such was the apparent force and power of the current of water rushing through the tube or column, that a misty vapor was thrown off at a considerable distance around, not unlike such as is seen in the presence of huge cataracts. The different shades and colorings reflected by the combination of water and clouds, formed a most magnificent and sublime scene in this wonderful exhibition of nature. It should be mentioned, that as soon as the Water Spout above described had formed, a second one made its appearance in the immediate vicinity of the first, exhibiting the same process of formation, and in all respects similar to the first. A third also commenced its formation from the dense cloud above, but failed to unite or meet with any column of water from below. The time from the first appearance of the Water Spouts we have described, to the period of their disappearance, was about twenty-five minutes. The wind blew at the same time moderately from the N. E., and the temperature of the weather was not far from forty-five degrees. The appear-

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ance which we have been imperfectly describing, was not only seen on the morning before stated by many persons of this village, but also by many individuals residing on the lake shore for many miles south of this place."

The following table exhibits the results of the observations made in Wisconsin, as far as they have come to the knowledge of the author.

TABLE OF METEOROLOGICAL OBSERVATIONS IN WISCONSIN.

	At Fort Snelling, 18 years.	At Fort Howard, 17 years.	At Fort Winnebago, 5 years.	At Fort Crawford, 11 years.	At Summit, 2 years.	At Milwaukee, 3 years.
Latitude,	44.53	44.40	43.35	43.03	43.05	43.03
Longitude,	93.05	87.00	88.58	90.52	88.21	87.48
Elevation above the sea,	780	600	810	580	780	590
Mean annual temperature,	45.15	44.60	44.89	47.35	47.10	47.37
Mean temperature of Winter,	17.29	20.24	20.81	20.69	27.20	25.70
" " Spring,	46.56	43.42	44.67	48.25	48.60	48.28
" " Autumn,	71.16	68.75	67.97	72.38	66.30	67.34
" " Summer,	45.59	45.99	46.10	48.09	46.60	48.15
Maximum,	100	100	99	100	92	94
Minimum,	— 40	— 32	— 33	— 32	— 12	— 24
Mean temperature of January,	13.58	18.14		19.72	25.8	21.77
" " February,	18.66	20.16		21.93	33.1	28.24
" " March,	32.12	31.19		32.48	36.3	35.90
" " April,	46.00	43.28		43.92	52.5	51.85
" " May,	62.11	57.13		59.45	57.0	57.10
" " June,	70.83	68.38		68.57	63.9	63 80
" " July,	75.47	72.25		72.40	71.2	70.20
" " August,	71.98	68.83		71.41	63.3	68.03
" " September	49.41	57.61		61.50	60.0	63.23
" " October,	49.27	47.51		45.45	44.8	46.98
" " November	33.36	34.29		33.06	35.0	34.23
" " December,	15.60	21.00		18.04	22.7	27.10
Annual aver. of Rain (inches),	30.32	38.83	31.88	29.54		27.96
Wind, North,	36	8		71	18	30
" South,	44	5		74	81	26
" East,	14	2		4	21	27
" West,	40	10		18	57	51
" Northeast,	29	138		13	26	60
" Northwest,	78	8		92	65	58
" Southeast,	49	1		53	31	40
" Southwest,	75	193		40	66	66

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The salubrity of the climate, the purity of the atmosphere, and of the water, which is usually obtained from copious living springs; the coolness and short duration of summer, and the dryness of the air during winter, all conspire to render Wisconsin one of the most healthy portions of the United States. The wet meadows, marshes and swamps, are constantly supplied with pure water from springs; and as they are not exposed during summer to a burning heat, they do not send forth those noxious and deleterious qualities so much dreaded in more southern and less favored latitudes. Many of our most flourishing towns and settlements are in the immediate vicinity of large swamps and partially overflown meadows, yet no injurious effects upon the general health are produced by them.

It has usually been found, in making new settlements in the western wilderness, that as the forests are cleared away and the surface thereby exposed to the direct influence of the sun and winds, a deleterious effect is produced on the general health—the decaying vegetable matter being thus suddenly made to send forth its malarious qualities. But in Wisconsin no such result is apprehended, or can be produced, for a large proportion of the country consists of oak openings and prairie, and may therefore be considered as *already cleared.* The removal of the few remaining "burr oaks" cannot have the same effect upon the soil as the cutting down of the dense forests of the other States. And besides this, the fires that have annually raged over the surface, often kindled purposely by the Indians, on their hunting excursions, have prevented that rapid accumulation of vegetable matter which is always found in deep shady woods where the fires do not so often penetrate.

It is believed that the facts here stated will be sufficient to satisfy the reader of the truth of the opinion expressed by our most intelligent physicians, that Wisconsin is, and will continue to be, one of the most healthy places in the world.

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The Territory was originally divided into three counties —Brown, Iowa and Crawford.

Brown county included all the country east of a line drawn due north and south, through the portage between the Wisconsin and Neenah rivers.

Iowa embraced all west of that line and south of the Wisconsin river; and

Crawford occupied the remainder, or all west of that line, and north of the Wisconsin.

The county of Milwaukee was separated from Brown, and extended to range number nine on the west, and to township twelve north. These were the only counties organized in 1836, when the Territory was separated from Michigan; but such has since been the rapid settlement of the country, that it has been deemed necessary to set off new counties at almost every session of the Legislature, and the number is now increased to twenty, as follows:

Lake counties, or those bounded on Lake Michigan—Brown, Manitowoc, Sheboygan, Washington, Milwaukee and Racine.

Interior eastern counties—Walworth, Rock, Jefferson, Dodge, Fond du Lac, Calumet, Winnebago and Marquette.

Interior western counties—Richland, Sauk, Portage, Dane, Green and Iowa.

River counties, or those bounded on the Mississippi—Grant, Crawford, St. Croix, Chippewa and La Pointe.

Besides these counties, the Legislature have now provided for the division of the counties of Milwaukee and Iowa, should the people by vote sanction the same; and the establishment of the counties of Waukesha, Lafayette and Montgomery.

The counties of Brown, Fond du Lac, Jefferson, Milwaukee, Racine, Rock, Walworth, Dodge, Dane and Washington, are governed by what is called the "town system" being divided into towns, each having its separate organiza-

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tion, and its own officers. The other counties are not divided into towns, and are under the management of three Commissioners, elected annually by the people.

Having completed the foregoing general observation relative to the whole Territory, we now propose to give, under appropriate heads, a more detailed description of the several counties, towns, rivers, lakes, &c., &c.

BROWN COUNTY

Is bounded on the north and east by the line between Wisconsin and the State of Michigan; on the south by the counties of Manitowoc, Calumet and Winnebago; and on the west by Portage; or the boundaries may be traced more accurately, as follows: beginning on the Neenah river, on the line between ranges nine and ten west, on Buffalo lake, and running thence north, to the Territorial boundary; thence east and south, along said boundary, to the line between townships twenty and twenty-one, extending to the middle of Lake Michigan; thence west to the northwest corner of Winnebago county; thence south to the Neenah; thence up that river to the place of beginning. It is impossible to estimate the area of this county with any degree of certainty, on account of the territorial line between Wisconsin and Michigan not having been finally established, and for the want of an accurate survey of this part of the Territory. Brown county was organized by an act of the Legislature of Michigan, passed October 16, 1818, and then included all the country between Lake Michigan and a line drawn due north, and south through the middle of the portage between the Neenah and Wisconsin rivers. The counties of Manitowoc, Sheboygan, Calumet, Fond du Lac, Marquette, Washington, Dodge, Milwaukee, Jefferson, Racine, Walworth, Rock, and parts of Dane and Portage, have been taken from Brown; and as she is still a large county, it is probable that her limits are destined, ere long,

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to be further reduced, before her boundaries are finally established.

Little is known of the geographical details of the northern part of this county: it abounds in forests of pine, or "pineries," and the streams are full of "falls" and "rapids," affording an abundance of water power, where this pine is now, in large quantities, manufactured into lumber, shingles, &c., which find a ready market at Milwaukee, and other ports on Lake Michigan. The soil is said to be of excellent quality, and is covered with dense forests—no openings or prairies being found of any considerable extent in the county. A singular feature in the topography of the country is indicated by the course of the principal streams, which have a general southeasterly direction towards Lake Michigan, except the Neenah, which, with Green Bay (an enlarged continuation of it), runs at right angles to this course, and nearly parallel with the general course of the lake. The cause of this feature may be found in a rocky ridge extending along the east side of the Neenah, giving direction to that river, and "heading" all those that take their rise west of it. This ridge extends southwest quite through the Territory, and from it originates another system of streams running east or southeast into Lake Michigan.

This peculiarity in the topographical features of the country has a very marked effect upon the direction of the wind, which usually blows from the northwest at Green Bay, as shown by the tables of the weather kept at that place.

The population of Brown county was, in the year

1830	964
1836	2,706
1838	3,084
1840	2,107
1842	2,146
Now estimated at	2,500

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The falling off in 1840 was not occasioned so much by an actual diminution of population, as by setting off new counties from Brown. The county seat was established by a vote of the people, at Depere.

Seven post-offices have been established in Brown county—at Bridgeport, Depere, Duck Creek, Green Bay, Kakalin, Little Chute and Menomonee. There is one weekly newspaper published at Green Bay.

Agreeably to the United States census of 1840, there were then in Brown county 475 horses, 1,053 neat cattle, 85 sheep, 1,380 swine, 42 groceries and stores, 8 lumber yards, 1 tannery, 3 grist mills, and 25 saw mills. The products of the preceding year (1839) were as follows: 7,614 bushels of wheat, 137 bushels of barley, 13,674 bushels of oats, 60 bushels of rye, 259 bushels of buckwheat, 3,695 bushels of Indian corn, 27,508 bushels of potatoes, 1,707 tons of hay, 30,460 pounds of maple sugar, 2,316 barrels of fish, and 27,880 dollars' worth of lumber. In 1845 there were 112,798 acres of land liable to tax, and the whole amount of taxable property was $309,764.

The "town system" is adopted, and the county is divided into four towns—Green Bay, Depere, Kakalin and Howard.

The town of KAKALIN is on the Neenah river, in the south part of the county. The Grand Kakalin rapids, from which this town derives its name, is near the middle of the town. It is the principal and most noted rapids of the Neenah. In a space of eight thousand six hundred feet, according to the survey of Capt. Cram, there is a descent, over horizontal strata of limestone rock, of forty-four feet. The river is here divided, by about thirty small islands, into numerous small channels. On approaching, and upon leaving these rapids, it has a direction nearly northeast, but upon the rapids it is deflected to a due east course. The Konkapot creek enters the river from the south, at these rapids; and a town, called La Fontaine, has been laid out

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near their foot. Stone, of excellent quality for building, may be quarried here in abundance. A company has been incorporated to construct a railroad from this point to Lake Winnebago. Bridgeport, or Waupakun, is situated at the mouth of Plum creek, in this town, about two miles below Rapide de Croche. From this place a survey has been made for a canal to Cliffton, on Lake Winnebago. The length of the route is fourteen miles and five hundred and eighty feet: a feeder from the north branch of the Manitowoc river, nearly two miles in length, would be necessary. The summit is eighty-five feet and fifty-one hundredths above Lake Winnebago, and the Manitowoc, at the head of the proposed feeder, is sixty-eight feet above that lake. By the construction of this canal the rapids of the Neenah would be avoided. The population of the town of Kakalin, in 1842, was 251.

The town of DEPERE lies between Kakalin and Green Bay, extending east to Lake Michigan. It derives its name from the Rapides des Peres, on the Neenah river, six miles above Green Bay, being the first of a series of rapids extending along this river as far as Lake Winnebago. The descent on these rapids is not very considerable, as the dam of six feet erected here by the "Fox river Hydraulic Company," not only flows the Depere, but also the Little Kakalin rapids. At these rapids a town has been built, which is the seat of justice for the county. It was laid out in 1835, on a level plain of considerable elevation above the river, with a good soil for gardens, and being at the head of natural navigation, and having a very extensive and valuable water power, will probably continue to grow and prosper until it becomes an important place. Good water is obtained by sinking wells to the depth of ten feet. A village has been laid out at the mouth of the Kewaunee, on Lake Michigan, and a survey made, with a view of constructing a harbor; but no improvements have been made at this point. It is suggested that a railroad from Kewau-

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nee to Green Bay, a distance of twenty-three miles, would save vessels navigating Lake Michigan a voyage up Green Bay and back, or one hundred and eighty miles, by making Kewaunee a "port" for Green Bay. Should this ever be done, Kewaunee may become an important point.

The population of Depere in 1842 was 320.

The town of GREEN BAY embraces all that part of the county east of Fox river and Green Bay, and not included in the towns of Depere and Kakalin. It takes its name from the large bay, or arm of Lake Michigan, of the same name, which is about one hundred miles long, with an average breadth of about twenty miles, and a supposed depth of five hundred feet. The towns of Navarino and Astor, on the east side of the Neenah at its mouth, constitute the north and south wards of the town or village of Green Bay. The former is the original and ancient town, Astor having been laid out in 1836, as an addition or extension of Navarino. Green Bay is one of the largest towns in the Territory; and it was at one time believed that it would become the "commercial emporium" of the whole country as far as the Mississippi. But during the last few years it has not increased so rapidly in population as its friends and citizens had anticipated. Its location is one of great beauty of scenery, at the mouth of an important river, but its commercial relations with the surrounding country are in a great degree dependent upon the improvement of the navigation of that river. Should that important work ever be accomplished, we may expect to find Green Bay to hold its rank as one among the principal towns or cities of Wisconsin. Its population was estimated in 1839, by the newspaper writers of that day, at about two thousand. According to the census taken in 1842, it numbered seven hundred and sixty-two, of which two hundred and seventy-nine were in the south ward, or Astor. It is now supposed to be about one thousand. There are many good buildings, spacious warehouses, excellent hotels, and fine churches, at

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Green Bay, and the country immediately around presents many fine farms, gardens, and residences; but a short distance in the interior, the land is but little occupied, affording many good locations for the emigrant who wishes to make agriculture his business. The bay and river afford a perfectly secure harbor, without the aid of piers or any other works. Steamboats of the largest class have landed at the wharves and discharged their cargo and passengers. The increased sales of land to actual settlers, the discovery of some mines of copper in the north part of the county, and the arrangement by which one or more of the larger steamboats navigating the lakes are to touch at this point, all seem to indicate a revival of business at Green Bay.

The following table exhibits the value of the goods and articles of all kinds imported and exported to and from Green Bay, as reported by Col. Albert, of the U. S. Topographical Engineers, from 1836 to 1841 inclusive:

Years.	Imports,	Exports.
1836	$392,291	$ 56,660
1837	352,649	109,980
1838	395,345	72,265
1839	258,791	121,126
1840	248,819	148,943
1841	269,618	87,120

Green Bay is 124 miles from Milwaukee, by way of Fond du Lac, or 114 by way of the United States road, by Sheboygan and Manitowoc; 34 miles from Manitowoc, 63 from Sheboygan, and 60 miles from Fond du Lac.

Fort Howard is a military post, opposite the town of Green Bay, at the mouth of the Neenah. It is situated on a slight eminence, commanding a delightful view of the town and harbor.

The town of HOWARD was established in 1844, embracing nearly all of the county west of Green Bay and the Neenah or Fox river. It embraces the settlement of Oneida Indians on Duck creek, and the fine lumbering region on the Oconto, Pensankee and other rivers.

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Several other towns have been laid out and established by law in this county, but they were subsequently attached to one or other of the three towns here described. Among them were Bay-settlement, Kewaunee, Perry and Pensaukee.

There are several important rivers in Brown County, which will now be noticed more in detail.

The MENOMONEE is quite a large river, that enters Green Bay about its middle, and forms part of the boundary of the county and the Territory. Its course has been very inaccurately represented on the old maps, and some difficulties have resulted in relation to the boundary between Wisconsin and Michigan, requiring the action of Congress to adjust,—so important is it for map-makers to preserve accuracy in their work!

Nearly all the accurate information we have relative to this stream is derived from the government survey, under Capt. Cram, who reports that "it passes a large volume of water into Green Bay at all seasons of the year, and yet is subject to considerable variations in height, consequent upon the fluctuations of its principal tributaries, which are themselves of considerable size. It is not navigable for any craft except canoes, owing to difficult rapids, shoals, and falls. The banks of the river, as well as its islands, from its mouth as far up as the Big Quinnesec Falls, are covered with an excellent growth of white and yellow pine timber, which in process of time must become very valuable. The bed of the river throughout is exceedingly rocky, and its banks in many places, particularly at the falls and principal rapids, consist chiefly of rock. It does not overflow its banks, which are generally quite bold. The valley of the Menomonee contains much good land, and is in the main much better than is generally supposed. The country adjacent to the upper part of the Menomonee, for about thirty miles on both sides, has an exceedingly desolate appearance; all the timber, which was once pine, has

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been consumed by fire, as far as the eye could reach on every side. The prospect is one of a broken landscape of barren hills, studded here and there with charred pine stubs, with scarce a living tree except the second growth of white birch and poplar. The soil of the hills is rocky and unfit for cultivation." Within this "burnt district" there are two perpendicular falls, about a mile apart, and about nine feet in height; and at the termination of that district is the Big Quinnesec Falls, where there is a difficult portage of one and a half miles. The total fall in this distance in the river is one hundred and thirty-four feet. "This amount," says Capt. Cram, "is divided into several chutes, with intervening rapids. The general aspect of this series of water falls is exceedingly picturesque: at every change of the point of view, new and varied beauties are perceived; but the lower fall of the series is by far the most magnificent of all the cascades on the Menomonee. Here the whole river is seen in a terrible phrenzy, dashing in mighty masses of foam over a perpendicular wall of rocks forty feet in height." The next fall in descending the river is the Little Quinnesec, where the fall is about thirty-five feet in an extent of two hundred and fifty feet, and the river is contracted in width to about eighty-five feet. The bed and banks are composed of slate rock. The name of these two falls, Quinnesec, is derived from what the Indians take to be smoke (spray), which is seen continually ascending from the bottom of the torrent high into the air. The portage is short, but very steep and difficult. A short distance below is Sandy Portage, a beautiful rapid about a mile in extent, with a perpendicular fall. Sturgeon Falls, so called because the sturgeon, in ascending the river, are stopped here, and collect in great numbers, is the next below Sandy Portage. The fall is thirteen and three-fourths feet, in a distance of one thousand feet. The river is here also contracted to eighty feet in width, and rushes through a straight gap or cliff, the summit of which is one hundred feet above

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the water below the falls. It is quite impossible for canoes or even sturgeon to pass these falls in safety. The scenery is picturesque, and the abundance of sturgeon causes it to be much visited by the Indians. The Quaver Rapids and portage, some miles below, require an hour for the passage. The Pemenee Falls (elbow), so called from a crook in the river just below, has a fall of eight and eighty-four hundredths feet, in a distance of eight hundred and thirty-three feet, exclusive of a short rapid immediately above the principal chute. The passage for the water, in its narrowest place, is fifty feet wide. A slight rapids, called White Rapids, lies between the Pemenee and the Grand Rapids, where for two miles the water is shoal, and passes over a smooth bottom of flat stones. Below these are two slight rapids, known as Chappeau's and the Menomonee Rapids. When this country becomes densely populated, the various rapids along the river will, in consequence of the water power they afford, become the sites of important villages and manufacturing towns.

The NEENAH, or, as it was formerly called, the Fox River of Green Bay,* is one of the most important rivers in Wisconsin, extending, as it does, nearly half across the Territory, and almost touching at the portage the waters of another river, by which navigation may, with a little improvement, be extended across the country from Lake Michigan to the Mississippi. It takes its rise in Lake Sarah, Portage county, and runs in a direction a little south of west (almost directly opposite its general course) for eighteen miles, towards the Wisconsin, as if with the intention of entering that river; but, owing to some unaccountable freak of nature, when within one and a half miles of that stream, makes a sudden turn to the north, and soon assumes its general course towards Green Bay. From the

* It is to be regretted that the citizens are not willing to adopt the Indian name of this important river, as we have another of the same name.

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portage to Lake Winnebago, through which this river passes, it winds about among extensive marshes covered with tall grass and wild rice. Below the lake there is a succession of rapids, that require an expenditure of about four hundred and fifty thousand dollars to render the river navigable. At the Winnebago Rapids, near Lake Winnebago, there is a descent of seven feet and fifty-four hundredths in a distance of seven thousand seven hundred feet. At the Grand Chute, nine miles above the Grand Kakalin, there is a fall of twenty-nine feet and sixty-eight hundredths, in a distance of eight thousand five hundred and twenty-five feet. At the head of the chute the bluffs are very steep and high. At the Little Chute, three miles above the Grand Kakalin, there is a descent of thirty-one feet and twenty-two hundredths, in a distance of nine thousand two hundred feet; and the banks are high and steep near the head of the chute. At the Grand Kakalin there is a fall of forty-four feet, in a distance of eight thousand six hundred feet. At the Rapide de Croche, four miles below the Grand Kakalin, the fall of the river is only one foot and seventeen hundredths, in a distance of thirteen hundred feet; but the "crook" is so short, and the current so rapid, and sets so strongly against the southern bank, that a boat would experience great difficulty in passing, and would invariably incur the risk of being forced against the shore before it could turn the elbow or crook. The Little Kakalin, and Depere Rapids, are already improved, by the dam at Depere, of six feet in height. The whole descent in these rapids is about one hundred and twenty feet; and if we add one foot per mile for the descent of the river between the rapids, we find Lake Winnebago one hundred and sixty feet above Lake Michigan. Above Lake Winnebago, the descent in the river is probably about half a foot per mile, or sixty-three feet to the portage, making that place, as stated in the table of altitudes (page 49), two hundred and twenty-three feet above Lake Michigan. At a place on

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this river called Red Banks, there are numerous ancient artificial mounds and earth-works, on both sides of the river.

Table of distances along the course of the Neenah:

From the mouth to the Rapides des Peres		7 miles.
Thence to the Little Kakalin		5
"	Rapide de Croche	7
"	Grand Kakalin	4
"	Little Chute	4
"	Grand Chute	5
"	Winnebago Rapids	7
"	Oshkosh (through Lake Winnebago)	15
"	Great Butte des Morts lake	4
"	through said lake	4
"	to mouth of Wolf river	3
"	Lake Puckawa	47
"	through said lake	6
"	to Buffalo lake	8
"	through said lake	11
"	to the portage	21
	Total	158

The other streams, which are wholly or partially within the county of Brown, so far as they have received names, and become known to the writer, are as follows:

APPLE RIVER, a branch of the Neenah from the northwest, entering about five miles below Rapide de Croche.

ASHWABENA, another small tributary of the Neenah, enters between Green Bay and Depere, from the west.

BENTON CREEK, a small branch of the West Twin river, about ten miles in length, entering near the north part of town twenty-one, range twenty-three.

DUCK CREEK, a small stream running through the tract of land occupied by the Oneida Indians, and entering Green Bay a little west of the Neenah. The settlement of Oneida Indians is on this creek, numbering about seven hundred, of whom one hundred and twenty are communicants of the Episcopal Church, under the charge of the Rev. Solomon Davis.

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EMBARRASS, a branch of Wolf river, from the west.

KEWAUNEE RIVER, a tributary of Lake Michigan, entering immediately east from the southern extremity of Green Bay. It is about twenty-five miles long, and drains about one hundred and twenty square miles of surface. It is said to be navigable for vessels drawing twelve feet, for a distance of five and a half miles from its mouth, to a place where it has worn a channel for itself through a limestone ledge, and affords good water power. It is the most northerly stream on the west side of the lake at which a good harbor can be constructed.

MANITOO RIVER (or, as it is vulgarly called, Devil river) rises near the south line of the country, and running parallel to, and within two or three miles of the Neenah river, for a distance of twenty miles, enters that river near its mouth. This peculiar tendency of several streams and lakes to parallelism, is probably owing to some peculiar arrangement of the strata of rock beneath the soil, which is here limestone.

MARTIN'S CREEK, a branch of the East Twin river, about seven miles in length, entering in town twenty-one, and range twenty-four.

MAUVAISE CREEK, a stream about nine miles in length, running between Benton's and Martin's Creek, into the East Twin.

MUD CREEK enters the Neenah from the south, at the foot of the Little Chute, two and a half miles above La Fontaine.

MUSKOS, a branch of the Menomonee, sometimes called Pine river, which enters near the Big Quinnesec Falls a few miles below the mouth of the Wesacota. It is so low in summer that it is not navigable, except for the smallest canoes; and in some seasons it is almost dry. This indicates a sandy bed and soil.

NAMAYACUM, a branch of the Neenah, entering from the north a few miles below Puckawa lake.

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Oconto, an important tributary of Green Bay, next north of the Pensaukee, and between that stream and the Peshtego. A short portage connects it with Wolf river. Some settlements have recently been commenced and saw-mills erected on this river. It has a considerable tributary from the north, called Little river.

Pensaukee, also a tributary of Green Bay, entering in town twenty-seven, upon which saw-mills, for the manufacture of pine lumber, have recently been built.

Peshtego. This is the largest tributary of Green Bay between the Menomonee and the Neenah. It is represented as entering an estuary, or arm of the bay, eight miles in length, and about six miles from the mouth of the Menomonee. But little is known of the character or extent of this stream.

Plover Portage river rises near the Plover portage on the Wisconsin river, and enters Wolf river in town twenty-one.

Rat river is a tributary of Wolf river from the east.

Suamico. Big Suamico enters Green Bay from the west, five miles north of Grassy Point; and Little Suamico enters six miles north from the mouth of the former.

Scarboro' creek, a branch of the Kewaunee, from the southwest, rising near the sources of the Twin rivers.

Thorn Apple creek, a small branch of the East Twin river, rising near the Kewaunee, and entering the Twin in township twenty-two.

Twin rivers (East and West), two streams that rise in the southwest part of Brown county, and run into Manitowoc, where they unite just before they enter Lake Michigan.

Wesacota (Brule, or Burnt river*), that branch of the Menomonee which approaches nearest to the "Lac Vieux Desert," and forming, therefore, a part of the northern

* As there is another river of this name in the Territory it is hoped that the Indian name may be adopted for this stream.

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boundary of Wisconsin. It is one of the principal branches, has a rapid current, and varies in width from eighty to one hundred feet. The bed is rocky, and it is generally so shallow as to render it difficult to ascend it with canoes, except in times of high water. The banks are thickly studded with white cedar, fir, poplar, tamarack, white birch and pine, for a great extent. There are two portages or falls, about ten miles above its junction with the Menomonee. It rises near Lake Brule. Its name is applied in consequence of the timber near its mouth having been destroyed by fire.

WOLF, or PEWAUGONEE, a large branch of the Neenah, from the north, entering three miles above the Great Butte des Morts, in Winnebago county. It is larger than the Neenah itself at the confluence, and immediately above it expands into a lake, called Pewaugan lake. Its head branches approach the Wisconsin near the Plover portage, so near that persons often take this route from Green Bay to the upper Wisconsin.

Many of the small LAKES of Brown county have not yet been noticed, and received names by which they may be designated in this work. The only one about which anything is definitely known, is

LAKE KATAKITTEKON, or "Lac Vieux Desert," at the head of the Wisconsin river (and not of the Montreal, as was supposed), which it is probable may fall within the county of Brown. The middle of this lake was made a point in the boundary of the Territory. On an island in this lake there was an old deserted planting ground of the Indians; hence its name with the French, Lac Vieux Desert. Lake of the Desert, as this is sometimes translated, is an improper name, the country about it being not a desert, but one of great fertility. It occupies a high level above Lakes Superior and Michigan, and abounds in small lakes, which constitute the heads of several large rivers. The Menomonee of Lake Michigan, then Otonagon and

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Montreal of Lake Superior, and the Wisconsin and Chippewa, of the Mississippi, all take their rise on the summit in the Katakittekon country. The following extract from Capt. Cram's report relative to this interesting country, is the only information we have in relation to it. "The water of these small reservoirs, and of the streams generally, is cold and limpid. Some of the lakes were observed to contain the speckled trout, such as are generally met with in high latitudes in the United States. The scenery of these lakes is beautiful, and the land adjacent to them is better than is generally believed by those who have not had an opportunity of personal examination. The country is not mountainous, but may be denominated 'rolling.' The growth of timber is tolerably heavy, consisting of white and yellow pine on the borders of the lakes; in some instances of cedar, fir, hemlock, and tamarack; and a little back of the lakes, of sugar maple, white maple, white and yellow birch, poplar, bass and hemlock. The soil is of a nature to be adapted to the culture of wheat, rye, grass, oats, flax, hemp, and potatoes. In some places the soil is rocky, although no very large masses or ledges of rocks were observed. The manufacture of maple sugar is carried on to a considerable extent by the Indians of this region. Many of their 'sugar bushes' were observed, and from the oldness of the marks upon the trees, the Indians must have known the art of extracting this luxury from the forest from an early date of their history. A very good kind of potatoe (wild ?) is raised here, the mode of preserving which was entirely new to us. The potatoes, which are of an oblong shape, and not larger than a man's thumb, are partially boiled, and carefully peeled while hot, without breaking the pulp, and strung like so many beads upon a twine, or tough thread of bark, and then hung in festoons on the ridge-pole of the wigwam, over the smoke of the fire, where they become thoroughly dry. This process renders the potatoe fit for transportation and use during the

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severest frosts without injury. The squaws take great interest in preparing this article of food, which is about the only vegetable they cultivate. This district is tolerably well provided with deer, beaver, otter, martin, mink, muskrat, ducks of various kinds, fish, teal, wild geese and partridges. Deer, however, are not so plentiful as further south. Winter usually sets in about the 20th October, in the Katakittekon country: this year from the 20th to the 28th October, the mercury ranged as low as from nine to twelve degrees below freezing, and for several days during the latter part of October, it was continually snowing. On the return of our party, Sandy Lake outlet had become so much frozen as to make it necessary to drag the canoes on the ice; and the ice was making very fast in all the lakes and streams—this in the very last days of October." The Lake Katakittekon is about three miles in its extreme length from north to south, and is very irregular in form.

Lake Showanno is the name of a lake near the head of Wolf river, from which there is a portage to the Oconto river, of Green Bay.

Green Bay, which derives its names from a fancied deeper green color of its waters than usual, may be considered as a lake connected with Lake Michigan, at the "Porte du Morts," or Death's Door. At this point there are several islands, the largest of which, called the Potawatomee island, is twenty-eight miles in circumference, and about five miles in diameter. Rock island (5 3-8 miles in circuit) lies near the northeast corner of it, and Detroit and Plum islands lie between it and the main shore at the south. Detroit I. is four miles long, half a mile wide, and nine and one-fourth miles around. Chambers' island is near the middle of Green Bay, and may be considered as belonging to Michigan. It is four miles long and two broad, and contains a lake or pond about a mile in length. Sturgeon Bay, and Little Sturgeon Bay, are two small arms of Green Bay, on the east side, about half

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way between the town of Green Bay and Death's Door. At this point gypsum, or plaster of Paris, has been found, and probably exists in sufficient quantities to become important, and may hereafter be worked to advantage. Near the southern extremity of the bay, there is a small island called GRASS ISLAND, lying opposite a point on the west side, a little north of Duck creek, called Grass Point; and "POINT AU SALLE" is a similar point on the east side of the bay.

MANITOWOC COUNTY.

This is a lake county, next south of Brown, being bounded on the north by Brown county, or the north line of township number twenty; on the east by Lake Michigan, or rather by the Territorial line in the middle of that lake; on the south by Sheboygan county, or the south line of township number seventeen; and on the west by Calumet county, or the west line of range twenty-one. It has a length from north to south of twenty-four miles, and an average breadth of twenty miles, and consequently an area of four hundred and eighty square miles. The coast line is twenty-eight and one fourth miles. This county was set off from Brown, and its boundaries defined in 1836, but was not organized as a separate county until 1839; and it is not yet fully organized, being attached to Fond du Lac county for judicial purposes. The population in 1840 was two hundred and thirty-five, and in 1842 it had only increased to two hundred and sixty-three, but since that time a considerable addition has been made to the population, so that it is now estimated at about six hundred. The principal settlements are at the Manitowoc Rapids, near the mouth of that river, and at Neshoto, on the West Twin river.

The whole county consists of timbered land—being usually hard wood, as beech, maple, bass-wood, &c., except along the margin of the principal streams, where pine predominates. Pine lumber is manufactured to a consider-

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able extent, and shipped on the lake to market. In general, the soil is of good quality, and wherever tested, it is found to yield all the usual crops in great abundance. It abounds in copious springs of pure water, and three small lakes exist in the western and southern parts of the county. One small lake in township eighteen, range twenty-three, was named English lake by the surveyors, because one of their party, named English, fell into the lake while engaged in making the public surveys.

The village of MANITOWOC, at the mouth of the river of the same name, consisting of some twenty or thirty buildings, is a place of some importance as the depôt of the lumber made on the river above. A lighthouse has been erected here by the government, and in 1843 a pier was constructed for the accommodation of lake vessels at private cost. The interest and safety of the lake navigation require a permanent harbor at this point, which it is hoped will soon be constructed by the general government.

MANITOWOC RAPIDS is the name of a village four miles above Manitowoc at the lake shore, thirty-four miles from Green Bay, twenty-nine miles from Sheboygan Falls, and eighty miles from Milwaukee. The rapids here, at the head of navigation of the river, afford a very extensive water power, which is taken advantage of to manufacture pine lumber and shingles to a great extent, to be shipped on Lake Michigan.

NESHETO is another village of this county, situated at the head of navigation of the West Twin river, where there is also a water-power and saw-mills. It is eight miles above the mouth of the river.

In 1840, there were in this county 11 horses, 81 neat cattle, 90 swine, one flouring mill, and six saw mills; and the products during the year 1839 were 225 bushels of wheat, 1,750 bushels of oats, 175 bushels of Indian corn, 1,900 bushels of potatoes, 67 tons of hay, 2,900 pounds of maple sugar, and 2,000 barrels of fish.

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The MANITOWOC RIVER, or "river of spirits," is the largest and principal stream in the county. It originates in two main branches called the north and south branches, which have their origin near the two extremities of Lake Winnebago, and unite at the west line of this county. It drains about four hundred square miles of surface, and is navigable four miles, to the foot of the rapids. From this point there is a series of rapids extending twelve miles, with an aggregate fall supposed to be about one hundred and forty feet. Above this point the current is gentle, and the stream is navigable for canoes to within a few miles of Lake Winnebago.

A canal has been proposed along this river to Lake Winnebago, for the purpose of bringing the trade of the country, lying in that vicinity, and west of it, to Manitowoc, instead of Green Bay. The distance is about forty miles, and the summit, according to the survey of Captain Cram, on the north branch, is eighty-five and a half feet above Lake Winnebago, and about two hundred and forty-five feet above Lake Michigan, requiring a lockage (should the summit be cut down seventeen and a half feet, to the level of the head marsh, in township twenty, range nineteen) of two hundred and twenty-eight feet on the east side, and sixty-eight feet on the west side of the summit; or thirty-seven locks, of eight feet lift, each within forty miles. It is supposed that an abundant supply of water can be commanded on the summit.

The EAST AND WEST TWIN RIVERS are two streams rising in Brown county, and running in a southerly direction nearly parallel with each other (of nearly equal size), and entering Lake Michigan six miles northeast from the mouth of Manitowoc. They unite their waters just before they enter the lake. The East Twin runs nearly its whole course almost exactly parallel with the lake shore—a circumstance observed in many other streams. Like the

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other tributaries of Lake Michigan, they have rapids a few miles above their mouth.

The SHEBOYGAN RIVER runs through the southwest corner of this county, and the head waters of Memee creek occupy a portion of the south tier of townships. Calvin's creek, a small tributary of Lake Michigan, four miles south of Manitowoc, and Point creek, seven miles from Manitowoc, are all that have received distinct names. There are two large branches of the Manitowoc, from the north, not yet named.

Post-offices have been established at Manitowoc, Manitowoc Rapids, and Twin rivers.

SHEBOYGAN COUNTY.

The county of SHEBOYGAN is bounded on the north by Manitowoc county; east by Lake Michigan; south by Washington county; and west by Fond du Lac county, embracing townships thirteen, fourteen, fifteen and sixteen, in ranges twenty, twenty-one, twenty-two and twenty-three east of the fourth principal meridian. It is twenty-four miles long from north to south, and has an average width of twenty and one-fourth miles. The area is, therefore, five hundred and ten square miles, of which about fifteen are covered by the waters of the Sheboygan lake, occupying the northwest corner township. The length of the coast line is twenty-six and one-eighth miles. This county was set off from Brown, in 1836, and organized for county purposes, in 1839. For judicial purposes it is united with Fond du Lac county; but is to be fully organized in 1846. The population in 1840 was one hundred and thirty-three; and in 1843 it was two hundred and twenty-one, and it is now supposed to be twelve hundred.

There are no prairies or openings; the whole country being covered by dense forests. Among the trees are found pine, to a considerable extent, which is manufactured into

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lumber at the Sheboygan Falls, near the mouth of the river, and shipped on Lake Michigan.

The SHEBOYGAN RIVER rises on the high grounds near the southern extremity of Lake Winnebago, in Fond du Lac county, and running through Sheboygan lake, makes a sudden bend to the north, into Manitowoc county, and then turning to the south east, enters Lake Michigan near the centre of Sheboygan county. The original Indian name of this river it is almost impossible for any white man to pronounce (Shawb-wa-way-gun), and its meaning is, "the river that comes out of the ground." Whether it has any part of its course under the ground, as is often the case in limestone countries, and as this name would seem to indicate, is not known. It drains about three hundred and eighty square miles of surface. At the crossing of the United States road, about six miles above the mouth, there is a rapid or fall, affording abundance of water power, which is already improved. A town has been commenced here called "Sheboygan Falls."

MULLET RIVER is a considerable branch of the Sheboygan, entering on the south side, one mile above the Falls, and ONION RIVER enters immediately at the Falls. This last has a southerly direction for some distance, to a place noted as the "Salt Licks," and then turns completely around and runs north. Whether these salt licks indicate the existence of salt water or springs in the vicinity, remains to be determined. The rocks found here, and throughout the county, are limestone, similar to that found throughout the eastern portion of the Territory. The MEMEE CREEK is another instance of that remarkable parallelism so often observed in the rivers and streams of Wisconsin. It rises in Manitowoc county, and runs south between the Sheboygan river and the lake shore, and nearly parallel with each. It enters the lake three miles north of Sheboygan, having made a sudden turn to the northeast a few miles above its junction. BLACK CREEK runs nearly its

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whole course (about six miles) parallel with the lake shore, and only about half a mile from it. It enters the lake three miles south of Sheboygan.

In 1840, there were in this county 4 horses, 59 neat cattle, 83 swine, one grist-mill and two saw-mills; and the products of the preceding year were estimated to be 548 bushels of wheat, 985 of oats, 75 of buckwheat, 170 of Indian corn, and 1,808 of potatoes; 62 tons of hay, 910 pounds of maple sugar, 420 barrels of fish, and eight thousand five hundred dollars worth of lumber.

There are five small lakes in this county, that are named on the maps, and four others not named.

Bear Lake,	-	Section	29,	Town'p	15,	Range	20.
Cedar Lake,	-	"	31 & 32,	"	16,	"	21.
Big Elkhart Lake,		"	29 & 30,	"	16,	"	21.
Little Elkhart L.		"	33 & 34,	"	16,	"	21.
Sheboygan Lake,		"		"	16,	"	21.

The town of SHEBOYGAN is situated on the shore of Lake Michigan at the mouth of the Sheboygan river, and is the port at which the commercial business of this county is mostly done. The value of the business done at this point, as stated by Col. Abert, is as follows:

Years.	Imports.	Exports.
1836	$11,000	$13,128
1837	12,000	20,150
1838	4,000	12,158
1839	2,200	16,050
1840	650	13,518
1841	725	12,058

Since 1841, no statements of the amount of business have been published. The town now contains about three hundred inhabitants, and will soon become one of the most important points on the lake shore in the Territory. A temporary pier has been built to accommodate the shipping; and a good road opened between this place and Fond du Lac, thirty-five miles, for which the sum of three thou-

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sand dollars was appropriated by the general government. This road not only connects Sheboygan with the fine farming region about Fond du Lac, but also with the navigation of the Fox and Wisconsin rivers.

SHEBOYGAN FALLS is the name of a thriving village situated at the Falls of the Sheboygan river six miles above the mouth, which is rapidly increasing in population and business. Sheboygan Falls is fifty-one miles from Milwaukee, twenty-nine from Manitowoc Falls, and sixty-three from Green Bay. There are two post-offices in Sheboygan county—at Sheboygan, and Sheboygan Falls.

WASHINGTON COUNTY.

This is a large county lying on Lake Michigan, between Milwaukee and Sheboygan counties, and bounded on the west by Dodge county. It extends from the south line of township nine to the north line of town twelve, and from the west line of range eighteen to the lake—being twenty-four miles wide from north to south, and twenty-seven miles average length; and having, consequently, an area of six hundred and forty-eight miles. The coast line in this county is twenty-five and three-eighth miles. It was set off from Milwaukee county in 1836, and organized for county purposes in 1840, and for judicial purposes in 1845. The first settlements in this county were commenced in 1836, and in 1838 the population was sixty-four; in 1840, it had increased to three hundred and forty-three; and in 1842, to nine hundred and sixty-five—showing a rate of increase that will soon make this one of the most important counties.

Its present population is estimated at five thousand five hundred. Having but little direct connection with the lake navigation, and the whole county being covered with a forest of oak, maple, beech, basswood, &c., will in some measure prevent the rapid settlement that might under other circumstances be expected. But Washington county

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has a soil which is, perhaps, not surpassed by any in the Territory; an abundance of water gushing up from the limestone substratum on almost every quarter section, and extensive water privileges at the Milwaukee Falls, and many other places. With these privileges, we may safely predict that this will, in time, become one of the richest counties.

A considerable number of German emigrants have made their new homes in the southern part of this county.

The Milwaukee river lies chiefly in Washington county, rising near the sources of the Sheboygan, in Fond du Lac county, and running in a southeasterly direction about thirty miles, to within a few miles of the lake, where it turns to the south, and runs about thirty miles parallel with the shore, and enters the lake at Milwaukee. Near the mouth of Cedar Creek it is confined between high perpendicular banks of limestone rock, and has a considerable fall. This place is called the "Milwaukee Falls," and from here to the head of the rapids, near Milwaukee, the river is navigable for small boats. About seven hundred and fifty square miles of surface are drained by this river. Cedar Creek is a branch of the Milwaukee, entering a little below the falls, and having a similar fall near the junction, over the same limestone ledge. It is a rapid stream, supplied chiefly by many copious springs, and having a very crooked and irregular course. It is the outlet of

Musquewoc Lake, a beautiful sheet of water, four miles in length, five-eighths of a mile wide, and nine and one-fourth miles in circumference, near the western part of the county.

Sauk Creek is a small tributary to Lake Michigan, entering at a place called Sauk Washington, where there is a thriving little village, at which much business is done. A pier has been built at this place at which wood is furnished for steamboats navigating the lake. A town was laid out on the west side of the Milwaukee river, opposite this

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point, called Saukville, twenty-six miles from Milwaukee, and twenty-seven miles from Sheboygan Falls. A road has been opened by the general government from Sauk to Dekorra, on the Wisconsin river, which is now so completely grown up with bushes and small trees, as to be almost impassable.

STONY CREEK is a small stream in the north part of the county; and PIGEON CREEK enters the Milwaukee in town nine. RANDOM LAKE is in sections nine, ten, fifteen and sixteen, township twelve, range twenty-one. On Pigeon creek there is a saw-mill, in excavating for the foundation of which a piece of native copper was found.

Besides the two lakes already mentioned, there are twenty-three others, all very small, in this county.

The statistics of Washington county, as exhibited by the United States census of 1840, are as follows: 3 horses, 277 neat cattle, 1 sheep, 288 swine, 3 saw-mills; 282 bushels of wheat, 165 of oats, 30 of rye, 74 of buckwheat, 558 of Indian corn and 2,150 of potatoes; 3 pounds of hops, 88 tons of hay, 4,659 pounds of maple sugar, and eight hundred dollars worth of lumber.

Several villages have recently been laid out in this county, at which more or less improvement has been made, besides Sauk Washington and Saukville, which were laid out in 1836. The principal are Hamburgh, Cedarburgh, Mequon, Muker, Kerncastle, Rubicon, and West Bend.

Post-offices have been established at Hamburgh, Mequon, Muker, Rubicon, and Washington.

The township system of government has been recently adopted in this county, and eleven towns have been established, as follows:

ADDISON, embracing townships eleven and twelve in range eighteen.

ERIN, township nine, range eighteen.

GERMANTOWN, township nine, range twenty.

GRAFTON, township ten, in ranges twenty-one and twenty-two.

JACKSON, township ten, in range twenty.

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Mequon, tonwnship nine, in ranges twenty-one and twenty-two.

Polk, township ten, in range nineteen.

Port Washington, townships eleven and twelve, in ranges twenty-one, twenty-two, and twenty-three.

Richfield, township nine, in range nineteen.

West Bend, townships eleven and twelve, in ranges nineteen and twenty.

Wright, township ten, in range eighteen.

MILWAUKEE COUNTY

Is bounded on the north by Dodge and Washington counties; on the east by Lake Michigan; on the south by Racine and Walworth counties; and on the west by Jefferson: or on the north by the north line of township eight; south by the south line of township five; and west by the west line of range seventeen. Its mean or average length is thirty-three and seven-eighth miles from east to west, and its width is twenty-four miles—occupying an area of eight hundred and thirteen square miles or sections. The length of the coast line, measuring around the bays and points, is twenty-six and seven-eighth miles. Milwaukee county was set off from Brown, September 6, 1834, by an act of the Legislature of Michigan, and organized the next year. It then extended from the Illinois State line seventy-two miles north, and west beyond Madison, Dana county. In June, 1836, the population amounted to two thousand eight hundred and ninety-two; in 1838, to three thousand one hundred and thirty-one; in 1840, to five thousand six hundred and five; and in 1842, when last enumerated, to nine thousand five hundred and sixty-five. Such has been the rapid increase since June, 1842, that the population may now be safely estimated at twenty-five thousand.

"The town system" of government was adopted by a vote of the people, and the county is divided into twenty-three towns, as follows:

Brookfield embraces township seven, range twenty.

Delafield, township seven, range eighteen.

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EAGLE, township five, range seventeen.
FRANKLIN, township five, range twenty-one.
GENESEE, township six, range eighteen.
GRANVILLE, township eight, range twenty-one.
GREENFIELD, township six, range twenty-one.
LAKE, township six, range twenty-two.
LISBON, township eight, range nineteen.
MENOMONEE, township eight, range twenty.
MEQUANIGO, township five, range eighteen.
MILWAUKEE, all of township eight, and so much of township seven, in range twenty-two, as is not included within the limits of the city of Milwaukee.
MUSKEGO, township five, range twenty.
NEW BERLIN, township six, range twenty.
OAK CREEK, township five, ranges twenty-two and twenty-three.
OCONOMEWOC, township eight, range seventeen.
OTTAWA, township six, range seventeen.
PEWAUKEE, township seven, range nineteen.
PRAIRIEVILLE, township six, range nineteen.
SUMMIT, township seven, range seventeen.
VERNON, township five, range eighteen.
WARREN, township eight, range eighteen.
WAWATOSA, township seven, range twenty-one.
And the *five wards* in the city of Milwaukee are ranked as separate towns.

In 1840, there were in this county 541 horses, 5,100 neat cattle, 798 sheep, 8,114 swine, 1 iron foundry, 26 stores and groceries, 2 printing-offices, 8 grist-mills, 13 saw-mills; and in 1839, the amount of produce was 34,236 bushels of wheat, 845 of barley, 26,863 of oats, 147 of rye, 1,829 of buckwheat, 26,820 of Indian corn, and 64,242 of potatoes; 67 pounds of wool; 4,574 tons of hay, 48,886 pounds of maple sugar, and fifteen thousand one hundred dollars worth of skins and furs.

Milwaukee county is to be divided by the line between ranges twenty and twenty-one, and a new county established to be called WAUKESHA, should the people within the limits of the proposed new county vote in favor of the division at the next general election. This county will be

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twenty-four miles square, embracing the towns of Brookfield, Delafield, Eagle, Genesee, Lisbon, Menomonee, Mequanigo, Muskego, New Berlin, Oconomewoc, Ottawa, Pewaukee, Prairieville, Summit, Vernon, and Warren; leaving in the county of Milwaukee only the towns of Lake, Oak Creek, Franklin, Greenfield, Wawatosa, Granville and Milwaukee.

The following Table exhibits the Statistics of the different towns in the county, in the year 1840, agreeably to the United States census. The towns omitted in the table, were not then organized:

TOWNS.	Population.	Horses.	Neat Cattle.	Swine.	Wheat.	Oats.	Corn.	Potatoes.	Sheep.	Sugar.
Brookfield	148	6	166	384	287	350	1,364	2,350	...	2,655
Franklin	248	25	364	494	590	30	2,234	4,675	124	6,167
Genesee	238	46	321	716	4,388	....	3,120	3,575	107	.....
Granville	225	12	282	368	796	311	1,120	2,250	83	5,810
Greenfield	404	23	278	553	1,253	485	1,830	4,881	20	5,308
Lake	418	39	388	693	1,284	1,377	3,528	5,825	6	6,340
Lisbon	116	12	107	240	914	1,430	810	3,085	...	491
Menomonee	59	..	36	69	214	200	470	925	...	570
Mequanago	172	26	220	390	2,868	4,470	1,706	3,325	...	....
Milwaukee	1,712	98	571	651	263	390	650	1,000	...	....
Muskego	130	9	162	267	309	50	740	1,454	10	320
New Berlin	199	10	202	398	628	200	1,540	2,020	...	6,110
Pewaukee	222	38	236	413	2,842	1,815	2,040	3,469	15	.....
Prairieville	450	81	597	1,036	9,338	6,242	4,750	6,504	43	500
Summit	335	62	471	681	3,215	2,675	3,815	7,055	39	2,175
Vernon	187	26	430	857	4,005	770	2,708	2,872	179	3,750
Wawatosa	342	28	319	603	2,155	1,720	4,395	9,866	135	7,490

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The soil, generally speaking, is abundantly rich, and adapted to the growth of the usual crops in this climate and latitude. East of a line running up Root river, thence down Poplar creek, and up the Pishtaka, the land is covered with a heavy growth of timber, among which are the following species or kinds: hard and soft maple, white birch, hickory (two kinds), white and red cedar, white and red beech, black and white walnut, white and yellow pine, tamarack, sycamore, hackberry, poplar,* balm of Gilead,† aspen,‡ white, red, burr and pin oak, bass-wood, common and slippery elm. Several of these, as the red cedar, pine, and sycamore,§ are, however, not very often found. West of the line above described, the country consists of oak openings, interspersed with small prairies, except in the town of Oconomewoc. The oak most usual on the openings, are the white oak and burr oak (*Quercus macrocarpa*); but these species are seldom mixed, and the kind of tree gives name to the openings; thus we say "white oak openings," or "burr oak openings." There is believed to be a difference in the character of the soil on the different kinds of openings, as well as on the prairies.

The shore of Lake Michigan, in this county, consists of a bank of clay, from twenty to one hundred feet in height, and as nearly perpendicular as the nature of the material will admit. From this the country gradually rises, as we pass westward, until we attain the summit between the lake and Rock river, which is three hundred and sixteen feet above the level of the lake. West of this summit the country maintains nearly a uniform level, or has but a moderate inclination towards Rock river. This summit is believed to be the lowest point in the dividing ridge between the waters of the Great Lakes and the Mississippi in this

* Populus grandidentata. † P. lævigata. ‡ P. tremuloides.

§ Only one sycamore, or button-wood tree, has been observed by the author in Wisconsin—and that was destroyed in clearing the farm of A. Sweet, Esq., near Milwaukee.

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Territory, except at the portage between the Wisconsin and Neenah rivers. The surface of the country in this county is broken by the valleys of several streams, mostly running towards the south; but these valleys are usually not very much depressed below the general level. By passing up the Menomonee valley, and across the head branches of the Pishtaka, a canal or railroad may reach the summit by a very gradual and uniform ascent. The valleys of the Menomonee and Bark rivers approach each other at the north (almost circling the head waters of the Pishtaka), as if for the purpose of inviting improvement, by canal or railroad, in this direction. Some of the highest points in the western part of the county are probably five hundred feet above Lake Michigan.

The whole county is based upon limestone, mostly of a light bluish-grey color, and disposed in thin, nearly horizontal layers or strata. It is an excellent building material, and affords good lime. Some quarries afford stone full of small cavities, rendering it unfit for polishing; but it is used for works of a coarser kind, and it is more easily penetrated by heat in the manufacture of lime, in consequence of these cavities. The lime made from it is very pure and white.

There are thirteen post-offices now established in this county—at Delafield, Greenfield, Kewaunee, Menomonee Falls, Milwaukee, Muskego, Mequanigo, New Berlin, Oak Creek, Prairieville, St. Mary's Summit, Vernon, Brookfield, and Eagleville.

Besides Milwaukee, the county seat, there are several smaller villages in the county, the principal of which are Prairieville, Mequanigo, Summit, Delafield, Oconomewoc, Oak Creek, Waterville, &c.

PRAIRIEVILLE is situated on the Pishtaka (or Fox) river, on the site of an old Indian village, sixteen miles west from Milwaukee. It is at the head of a beautiful prairie, occupying the valley of the river, which here has a descent of ten feet in the distance of half a mile. The water power

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thus afforded, is used to propel one of the largest flouring mills in the Territory. The population is now probably several hundred, and many new and handsome dwelling-houses are annually erected. There are here three hotels, five churches, an academy, a saw-mill, several stores, and a weekly newspaper, devoted to the cause of the "Liberty Party." In 1846 a college was incorporated here, called Carrol College.

In 1841, Prairieville exported about 7,000 barrels of flour, 250 of pork, and 12,000 pounds of hides, valued in all at thirty-eight thousand eight hundred and forty dollars.

The merchandise, &c., imported during the same year, was estimated at twenty-five thousand seven hundred dollars.

MILWAUKEE, which is now incorporated as a CITY, is situated on the river of the same name, near its mouth, or entrance into the Milwaukee bay of Lake Michigan, ninety miles north from Chicago, Illinois; one hundred and fourteen miles from Green Bay, and about eighty miles due east from Madison. It was laid out as a village in 1835, and the settlement was not commenced until that year; but such was the rapidity with which the population increased, that in June of the succeeding year, the number of inhabitants was one thousand two hundred and six; and in September, 1843, six thousand and sixty-eight. No town or city in the United States has grown up with anything like the rapidity of Milwaukee. Within ten years from the time when the first family arrived here, with a view to permanent residence, we see a city with a population of at least TEN THOUSAND.

The city of Rochester, in Western New York, has often been referred to as having increased more rapidly in wealth and population than any other in the world—and perhaps she *has been* entitled to that distinction. Mr. O'Reilley, who has written a very valuable book, entitled "Sketches of Rochester and Western New York," asks exultingly,

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"Where, in what place, through all the broad and fertile West, can there be shown any town which has surpassed Rochester in the permanent increase of population, business and wealth?" We may answer the question by making a little comparison.

Rochester was laid out in 1812, and in 1816, or four years, the population was three hundred and thirty-one.

In 1820, or eight years, the population was fifteen hundred.

Milwaukee was laid out in 1835, and in 1839, or four years, the population was fifteen hundred—or as much increase in *four* years, as Rochester had in *eight*. But in 1843, or eight years, the population of Milwaukee was over six thousand, or four times as much as Rochester during the same period.

The city commences about a mile above the mouth of the river, at a place called Walker's Point, and extends about a mile and a half along the river. Below Walker's Point, the river is bordered by impassable marshes. The ground occupied by the town is uneven, rising from the river to the height of from fifty to one hundred feet, thus affording very beautiful situations for residences, commanding a full view of the town and bay, with its shipping. But few of these sites have yet been occupied and improved, as their peculiar importance and interesting views would lead us to expect. Along the base and front of these hills are a great number of springs of pure water, sufficient, if collected into a reservoir, to supply the wants of a considerable population. The river is sufficiently wide and deep to accommodate a large amount of shipping, and continues so for some distance above the city. At the head of this navigable portion of the river, a dam has been built by the Milwaukee and Rock River Canal Company, which raises the water twelve feet above high water, and causes a slack water navigation extending two miles further up the stream. A canal of one mile and a quarter brings this water into the town on the

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west side of the river, and creates there a water power which is estimated to be equal to about one hundred runs of mill-stones; and the canal has a width and depth sufficient to pass almost the whole body of water into the river. The manufactories erected on this canal, have the advantage of being located on the immediate bank of the river, and may be approached by the largest steamboats navigating the Great Lakes—thus affording advantages not usually found associated in the western country.

The following statement exhibits the value of the principal articles of imports and exports at Milwaukee, from the first settlement in 1835, to the end of the year 1841, as ascertained by a committee of the Corporation:

Years.	Imports.	Exports.
1835–6	$588,950	$26,145
1837	641,235	47,745
1838	783,458	47,690
1839	866,740	43,568
1840	1,147,803	53,828
1841	1,805,277	186,777

Since 1841, no estimate has been made of the amount of business done; but judging from the increased number of business houses, we may suppose that it has kept pace with the increase of population. The principal items embraced in this statement of importations are, merchandise, lumber, salt, fish, &c. The principal items of exportation are, merchandise, lard, flour, wheat, pork, furs, &c. The first exportation of flour was in 1839, and in this year commenced also the exportation of lead brought here by waggons over land, from the mining district about Mineral Point. In 1841, copper was added to the list of exports; and the amount of lead, shot, and copper shipped here during that year, was 1,768,175 pounds.

The following is a statement of the amount of money received at the Milwaukee Land Office, for sales of public land, during each year since the office was opened:

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Years.	Amount.
1836	$88,432 10
1837	90,131 81
1838	69,350 24
1839	785,950 57
1840	138,661 02
1841	103,547 98
1842	148,986 64
1843	192,401 11
1844	245,145 26
1845	358,753 00
Total,	$2,221,359 73

It will be observed that this is about two thirds of the whole proceeds of sales of public land in this Territory, as exhibited in this work, page 31.

The number of arrivals of steamboats and other vessels, at Milwaukee, were noted by persons interested in such matters, during five or six years, as follows:

Years.	Steamboat arrivals.	Schooners, &c.
1835	2	80
1836	19	193
1837	97	290
1838	126	137
1839	182	118
1840	174	

Since this time the number has been gradually increasing until there were, in 1845, about one thousand arrivals of steamboats and other vessels.

Appropriations have been made by Congress for the construction of a harbor at Milwaukee, and considerable progress has been made in the work. When this is completed, the largest steamboats can enter the river, and land at any of the wharves within the town. Several piers of a temporary kind have been constructed by individual enterprise, at which much of the commercial business is now done; and, owing to the great distance of the public harbor from the city (being about a mile below the first ware-

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houses), it is probable that the business will continue to be done at these piers to some considerable extent, even after the harbor is completed.

In April, 1845, a fire occurred on East Water street between Michigan and Huron streets, at which about one hundred thousand dollars worth of property was destroyed; but the space thus left vacant was in less than one year nearly all filled with substantial brick buildings, three, four, and five stories high.

There is in Milwaukee one daily newspaper, and another about to be commenced; and three weekly; one of the latter in the German language.

The MILWAUKEE BAY is a semicircular indentation of Lake Michigan, at Milwaukee, about six miles across, and three miles deep. The north and south points or capes protect the shipping from the effects of all storms or gales of wind, except those from the east, which seldom occur. The bottom is clay, affording good anchorage ground. The mouth of the river is about half a mile below the middle of this bay. It is supposed by many that all the space between the mouth of the river and the town, now occupied by impassable marshes, was once a portion of this bay, and there are many facts that go to substantiate, or render probable, this suggestion. It has been sounded to the depth of forty-two feet, without finding bottom; the apparent bottom, a few feet below the surface, being only an accumulation of the roots of grass and weeds floating on the water, and soft mud below.

The rivers and creeks of Milwaukee county are as follows:

BARK RIVER, and OCONOMEWOC CREEK, running in a southwesterly direction, through the western part of the county, into Rock river; MILWAUKEE RIVER, and the MENOMONEE RIVER, running in a southeasterly direction through the eastern part of the county into Lake Michigan; and between these lie the PISHTAKA or FOX RIVER

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and its branches, which run south, into Racine county. ROOT RIVER also takes its rise in this county. Among the streams of less importance are the Kinnickinnic creek, which enters the Milwaukee river at the mouth; Mequanigo creek, a branch of the Pishtaka, in the town of the same name; Muskego creek, or outlet; Oak creek, a tributary of Lake Michigan; Pewaukee outlet; Poplar creek, a branch of the Pishtaka, in Brookfield; and the head waters of the Supernong, a branch of Bark river.

The MENOMONEE RIVER rises in the southern part of Washington county, and running in a southeasterly direction through the towns of Menomonee, Granville, and Wawatosa, enters the Milwaukee river, within the city limits of Milwaukee. It is a fine little stream, affording many valuable mill privileges, several of which are already improved. Several limestone quarries have been opened along its banks, which are usually high. It receives a branch in the town of Granville, called the "East Branch;" and above that point the valley is much contracted in width, there being no bottom lands on either side. Below the East Branch, the level or bottom lands are usually about half a mile in width.

At the place called the Menomonee Falls, 15 miles from Milwaukee, this river passes between perpendicular banks of limestone, sometimes thirty feet in height. There is a fall here of forty-eight feet, in the space of half a mile, and mills have been erected here. There is no perpendicular fall of water. The limestone may be quarried in layers of any desired thickness, and much of it is of an excellent quality for building, and even for ornamental purposes, being hard, and of a uniform texture, resembling marble. Some layers are filled with small cells or cavities, occasioned probably by the decay of some mineral substance that once filled them. This variety is probably the best for the manufacture of lime, requiring less fuel than the more compact variety.

There is a group of fine lakes in the western part of this

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county, and several others in the different parts of the county, as follows:

CROOKED LAKE, on Bark river, one mile west of Nemahbin lake—not represented on the plats of public surveys.

GOLD LAKE (Wissauwa) on the line between Jefferson and Milwaukee counties. It discharges its waters through a small stream into Bark river. It is three miles around, one mile and a fourth long, and has an area of two hundred and seventy acres.

KAUCHEE LAKE, on the Oconomewoc creek, next above the Oconomewoc lake, having a small lake called Mouse lake, near its northeast corner. It has a triangular shape, each side being about one and a half miles long, and a narrow bay extends half a mile from its southern extremity. It occupies nine hundred and fifty-seven acres, and has a periphery of five miles and three quarters. At the outlet of this lake a dam has been built, which has raised its waters above their original level.

LA BELLE LAKE, or the "beautiful lake," is the lower and largest of the Oconomewoc lakes, being two and a half miles long, one and a fourth wide, and occupying an area of a little more than two sections or square miles. It is six miles and a quarter around its shores. A town has been laid out at the eastern extremity of this lake, called Oconomewoc, where a dam across the creek produces a water power of considerable force. The west end of the lake is only one and a half miles from Rock river, and they might be connected by a canal. The river is fifteen feet lower than the lake, and the summit ridge is twenty-five feet higher than the lake, as ascertained by levelling.

LABRAUGH (Beaver) LAKE lies half a mile east from Pine lake, on which it discharges its waters. It is eighty-three chains long, and sixty-nine wide, with a circumference of three and one-fourth miles, and occupying an area of four hundred and twenty-three acres.

The MEQUANIGO LAKE is an expansion of the Pishtaka

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river, near the village of Mequanigo, one and a half miles long, and half a mile wide. It lies principally within an extensive marsh.

Mouse lake, so called, probably, from its diminutive size, is one of the Oconomewoc group, one and three-fourth miles in circumference, fifty-three chains long, and occupying one hundred acres of surface. It lies near the Kauchee.

Monish lake lies one mile southwest from Muskego lake. It is a small lake, forming the source of a branch of Muskego creek.

Muskego is one of the largest lakes in the county, occupying three thousand one hundred and sixty-acres, or nearly five sections. It is three and seven-eighths miles long, two wide, and eleven miles around. It discharges its waters through Muskego creek, into the Pishtaka, at Rochester, in Racine county.

Nagowicka lake is near the centre of the town of Delafield, two miles and a quarter long, by three-fourths broad, and occupies an area of six hundred and ninety acres. It is five miles and a quarter around. Bark river runs through it transversely, and it contains a small island, which adds much to the beauty of the lake. The shores are high and covered with scattered trees, presenting a fine prospect to the eye. Its surface is three hundred and four feet above Lake Michigan.

Nashotah (Twin) lakes—two small lakes lying north of Nemahbin lake, near the east line of the town of Summit. The north lake is two hundred and ninety-one feet above Lake Michigan, sixty-seven chains long, thirty-one wide, and has a periphery of two miles. On the east bank of this lake is the Episcopal College, recently established. The south lake is seventy-five chains long, twenty-seven wide, and has a periphery of two miles and a quarter.

Nemahbin lake lies near the east line of the town of Summit, and is quite similar, in many respects, to the Nagowica lake. Bark river passes through it transversely;

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and it has an island covered with trees of a different kind from those found in the surrounding country. It is five and a half miles around, two miles long, three-fourths of a mile wide, and covers five hundred and twenty-eight acres. Its surface is two hundred and eighty-nine feet above Lake Michigan.

NORTH LAKE (or Shunakee) lies north of Pine lake, in the town of Warren, is one mile and a quarter long, three-fourths of a mile wide, and has an area of five hundred and eighty-one acres. The Oconomewoc creek passes through this lake.

OCONOMEWOC LAKE is the most southern of the group of lakes, on the creek of the same name, being in the north part of township seven, range seventeen. It is one mile and three-fourths long, three-fourths of a mile wide, and has a periphery of six and three-fourth miles, and an area of seven hundred and fifty acres. Its surface is two hundred and eighty-two feet above Lake Michigan.

PEWAUKEE LAKE (or Pewaukee-wee-ning—lake of shells), so named by the observing Indians, on account of the great quantity of small shells found in the sand along the shore. These shells are not snail shells,* and hence Snail lake (as it is sometimes called) is an incorrect translation of the Indian name. It is four miles and a half long, and has an average width of about three-fourths of a mile. The coast line around it is eleven and one-sixth miles, and its area is three and one-third square miles, or sections. It lies in the towns of Delafield and Pewaukee, at an elevation of two hundred and sixty-three feet above Lake Michigan. It is supplied almost entirely by springs, and discharges about three hundred cubic feet of water per minute, through the Pewaukee outlet into the Pishtaka river.

* Snails are land animals, and not aquatic. The shells found here are bleached and mixed with small particles of white limestone. They are species of the genera Paludina, Valvata, Planorbis, Melania, Cyclas, and fragments of Anodonta.

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A dam has been erected, however, at the foot of this lake, which has raised its waters about four feet. It is surrounded by high, well wooded hills, rendering the scenery about it highly beautiful and interesting.

Around this lake at many places, as well as on other lakes in Wisconsin, may be observed a singular wall of round stones, or boulders, laid up with such regularity as to suggest the idea of being the work of art. A little further observation, however, will show that these walls are made by the expansion of the ice during the winter, which has a tendency to push them upon the shore. The sandy ridges around many lakes are caused in the same way. The process may be observed in a very cold day in the winter.

PINE LAKE lies immediately north of the Nagowicka, two and a quarter miles long, three-fourths of a mile wide, five miles and a quarter round, and has an area of six hundred and ninety acres—being exactly the same as the Nagowicka. The Indian name is Chenequa, or Pine, given in consequence of a few pine trees having been found on a small neck of land, or island in this lake.

POWACK LAKE is about three-fourths of a mile in diameter, lying one mile northwest from Muskego lake.

ROUND LAKE lies two miles west of Nemahbin.

SILVER LAKE lies three miles west of the Neshotah lake, in the town of Summit; is one mile long, five-eighths wide, two miles and five-eighths in circumference, and has an area of two hundred and seventy-five acres.

TUCK-KIP-PING LAKE is in the northeast part of the town of Warren. Its length is nearly two miles, width three-fourths, and periphery five and a half miles. Its area is five hundred and eleven acres.

The whole number of lakes in this county is thirty-eight.

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RACINE COUNTY

Is the most southern of the lake counties, and occupies the southeast corner of the Territory. It is bounded on the north by Milwaukee county, east by Lake Michigan, south by the State line of Illinois, and west by Walworth county; or it includes townships one, two, three, and four, in ranges nineteen, twenty, twenty-one, twenty-two, and twenty-three. The jurisdiction of this county, as well as all the others bounding on Lake Michigan, extends to the State line of Michigan, in the middle of the lake. Racine county is twenty-four miles wide, from north to south, and has an average length of twenty-five and two-third miles, and therefore an area of six hundred and sixteen square miles, or sections. The length of coast in this county is twenty-six and one-half miles. The country is generally even, or slightly rolling, and is almost destitute of timber. Burr oaks, hickory, &c., are found in occasional groves, and the remainder is prairie. Beds of limestone are found along some of the streams.

This county was set off from Milwaukee in 1836, and was then organized as a separate county. The population in 1838 was two thousand and fifty-four; in 1840 it had increased to three thousand four hundred and seventy-five; and in 1842 it had almost doubled, being six thousand three hundred and eighteen. Since that period the increase of population has been very considerable, so that it is now estimated at twelve thousand.

The villages in Racine county are Racine, Southport, Rochester, Burlington, Waterford, &c.

Racine, the seat of justice of the county, and the oldest settlement, is situated on Lake Michigan, at the mouth of Root river, occupying mostly a level plain, lying about fifty feet above the level of the lake. It is twenty-five miles south from Milwaukee, ten miles from Southport, and one hundred and fifty miles, by the United States road, from the

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Mississippi, at Sinipee. The village was incorporated in 1841. The citizens have, with but very little aid from the government, nearly completed a harbor at this place, in a permanent and durable manner—the piers being of the same kind as those built under the direction of the Topographical Bureau. At the extremity of the piers there is twelve feet depth of water—sufficient for all purposes of navigation. There is a reef of rocks in the lake off this place, about a mile and a half long and half a mile wide, which is supposed to be useful in protecting the harbor from the effects of storms. The river, within the bar, is represented as being wide and deep, and like most of the other tributaries of Lake Michigan, lies on a level with the lake for some distance above, forming a convenient and safe harbor for vessels. Above this slack water the river runs over beds of yellowish limestone, forming rapids, and affording water power sufficient to propel a considerable amount of machinery.

The amount of commercial business done each year, from 1836 to 1841 inclusive, as stated by Col. J. J. Abert, chief of the Topographical Bureau at Washington, is as follows:

Years.	Imports.	Exports.
1836	$52,835	$225
1837	49,895	1,000
1838	28,340	1,400
1839	52,920	2,000
1840	59,944	5,750
1841	108,898	25,041

The following statement of the trade of this place for 1842, is from the Racine Advocate, of December 28, 1842, and will convey a proper idea of the kinds and extent of business done at Racine:

IMPORTATIONS.

175 tons of merchandize,
2,000 barrels of salt,
2,423,000 feet of lumber,

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1,405 thousand of shingles,
850 tons of household furniture,
350 " of machinery and farming utensils.

EXPORTS.

38,000 bushels of wheat,
5,000 " of oats,
800 barrels of flour,
350 " of pork,
100 " of beef,
20,000 pounds of dry hides,
20,000 " of lead,
10,000 " of shot.

The population of Racine was ascertained, in October, 1845, to be two thousand five hundred and nine.

The amount of trade at Racine has very considerably increased since 1842, especially in the exportation of wheat, flour, and beef; and wool has recently been added to the list of exported products.

SOUTHPORT is situated on the lake shore, thirty-five miles from Milwaukee, and fifty-five from Chicago, in Illinois. It is the most southern place in Wisconsin at which it is supposed a harbor can be built—hence its name. It was commenced in 1836, and was incorporated in 1841. The population is now estimated at but little less than 3,000, having partaken largely of the increase of population within the last few years, as in 1840 it was only 337.

For the accommodation of the commercial business of this place, a pier was constructed in 1841, consisting of a plank-way or bridge, resting on piles driven into the bottom of the lake. This kind of improvement was first suggested by Mr. P. B. Cahoon, of Southport, and has since been adopted with much advantage at many other places. The pier extends sufficiently far into the lake to be approached by the largest vessels, and the plank-way is ele-

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vated sufficiently above the water to be free from any danger on account of the waves. Another pier of the same kind has since been built; and a permanent harbor has been commenced, for which two appropriations have been made by Congress.

There are no stone quarries or water privileges in the vicinity of Southport, but the surrounding country is a rich and fertile prairie, well adapted for all purposes of agriculture. The merchants of Southport supply a portion of the people of northern Illinois, as well as southern Wisconsin, with their commodities.

The shipments from Southport in 1844 are stated as follows:

122,429 bushels of wheat,
1,235 barrels of flour,
86,750 pounds of hides,
3,907 " of wool,
500 dollars worth of furs,
200 " " of potatoes,
14 barrels of cranberries.

The value of exports for

1843, was $64,240.
1844, " 93,504.

The shipment of wheat from this place was begun in 1841, and has gradually increased, so that the amount is estimated for 1845 at about two hundred and forty thousand bushels.

ROCHESTER is a thriving little village, situated on both sides of the Pishtaka river, at the entrance of the Muskegò outlet, and at the crossing of the United States road from Racine to the Mississippi; twenty-four miles from Racine, twenty-eight miles from Milwaukee, and forty-one from Janesville, on Rock River. Water power is obtained at this place on the river, and also on the Muskego outlet.

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It is to be regretted that the good citizens of this place have not adopted its Indian name, Waukeesha; and it may be hoped that they will show their good taste by doing so whenever the village is incorporated.

BURLINGTON is situated on the west side of the Pishtaka, at the entrance of the Geneva outlet, six miles below Rochester.

WATERFORD is a small village on the west side of the Pishtaka, a short distance above Rochester, where there is a flouring mill, a saw-mill, woollen factory, &c.

Post-offices have been established at the following places: Aurora, Burlington, Bristol, Caledonia, Ives' Grove, Lakeville, Mount Pleasant, Pleasant Prairie, Racine, Rochester, Salem, Salona, Southport, and Yorkville.

The town system of government is adopted in this county, and the towns are:

BLACK HAWK, township four in range twenty-two, and the east half of range twenty-one.

BRIGHTON, township two and sections twenty-nine to thirty-two, inclusive, in range twenty.

BURLINGTON, parts of townships two and three in range nineteen and twenty.

CALEDONIA, township four in range twenty-two.

MOUNT PLEASANT, township three in range twenty-two.

PARIS, township two in range twenty-one.

PIKE, township two in range twenty-two.

PLEASANT PRAIRIE, township one in range twenty-two.

RACINE, townships three and four in range twenty-three.

ROCHESTER occupies the northwest corner of the county, and is nine miles long (east and west) and eight miles wide.

SALEM, township one in range twenty.

WHEATLAND, township one, and two miles of township two, in range nineteen.

YORKVILLE, township three in range twenty-one, and the east half of range twenty.

There are four weekly newspapers published in Racine county—two at Racine and two at Southport.

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The statistics of the county of Racine, as ascertained in 1840, are as follows: 539 horses and mules, 4,506 neat cattle, 340 sheep, 6,549 swine; 2 commission houses, 19 stores and groceries, 2 lumber yards, 2 grist-mills, and 13 saw-mills. The products of 1839 were 36,099 bushels of wheat, 1,796 of barley, 41,028 of oats, 342 of rye, 3,481 of buckwheat, 30,168 of Indian corn, 53,667 of potatoes; 358 pounds of wool, 140 pounds of wax, 4,627 tons of hay, 6,051 pounds of maple sugar; and the produce of dairies was estimated at ten thousand and thirty dollars.

WIND LAKE is the largest of the lakes in Racine county, lying one mile below Muskego Lake, on Muskego creek. It is six and one-eighth miles in circuit, two miles long, one and a half wide, and occupies an area of two square miles. There are twenty-four smaller lakes, or ponds, in the western part of the county, the Indian names of which are

KENONGAMORE, on sections five, six and seven, in township four, range twenty, and about one mile long.

PANYACK, near the centre of township three, range twenty, one and a fourth miles long, and three-fourths wide.

TISH-SHAR-GON, in township four, range nineteen, is about a mile long, and discharges its waters by a short stream into the Pishtaka.

WAUKEESHA is a mile in diameter, lying between Wind lake and the Kenongamong.

The PISHTAKA RIVER, or "Fox river of the Illinois," is the principal stream in this county, running through the western tier of townships from north to south. It rises in the north part of Milwaukee county, and enters the Illinois river at Ottawa. It has been proposed to improve the navigation of this river, by means of dams and locks, so as to create a slack water from its mouth, where it is connected with the Illinois and Michigan canal, as far as the rapids at Prairieville—and there is no practical difficulty in the way of accomplishing this important work. From the foot

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of the rapids at Prairieville to Elgin, about thirty-five miles south of the State line, there is a descent of ninety-six feet, or nearly one foot per mile, on an average, measuring the course of the river. This would require twelve dams, of eight feet each, and the average length of each pond would be about seven or eight miles. At Elgin, the river is one hundred and fifteen feet above Lake Michigan, requiring that amount of lockage to unite with the Illinois canal.

The DES PLAINES is another branch of the Illinois river, that rises in Racine county. It is usually called the O'Plaine. Its name is derived from a species of maple called *plaine*, by the French. Its aboriginal name was She-shik-ma-o.

ROOT RIVER is about thirty-five miles in length, rising in Milwaukee county and entering Lake Michigan at Racine. It is quite a rapid stream, as it originates in very high ground; but the small quantity of water renders it of but little value for hydraulic purposes, except at the rapids near Racine. It has been proposed to increase the quantity of water, by diverting the outlet of Muskego Lake into Root river, which, it is said, can be done at a small expense—thus robbing the Gulf of Mexico of a portion of its legitimate supply for the purpose of increasing the waters of the Great Lakes. It is probable that the citizens of the great Mississippi valley would object to this measure, and especially that portion of them who reside on and near the Muskego outlet, below the proposed point of diversion. No levels have been taken, however, to ascertain whether this can be done. It has also been proposed to connect the lake with the Pishtaka, by way of this outlet, by means of a canal.

Among the smaller streams in Racine county, are Pike creek, South Branch (of Root river), and Skunk creek.

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LAKE MICHIGAN.

Having completed the foregoing notices of the counties on Lake Michigan, it seems proper here to make some observations relative to this lake. It is the only one of the great chain of inland seas that lies wholly within the United States. Its exact form and dimensions cannot be ascertained until the surveys of Wisconsin and Michigan are united at the north, and the meanders of that portion of the lake are completed. It is estimated to have a length of about three hundred and twenty miles, and a mean or average breadth of seventy miles—having, therefore, an area of twenty-two thousand four hundred square miles. This is exclusive of Green Bay, which may be considered as only a portion of this great lake, having an area of about two thousand square miles. The surface of Lake Michigan is five hundred and seventy-eight feet above the level of the ocean, and its mean depth is estimated at one thousand feet. The bottom is, therefore, about four hundred feet below the ocean level. Its greatest width is opposite Milwaukee, where it is nearly one hundred miles.

The length of coast on Lake Michigan, as near as can at present be ascertained, is as follows:

	Miles.
In Wisconsin, from the State of Illinois to the north point of Rock Island, at the entrance of Green Bay (correct), .	257
In Michigan, from Rock Island to the narrowest point of the Straits of Mackinaw, ... 159	
Thence to the south line of the State, . . . 462*—621	
In Indiana, ...	39
In Illinois, ...	63
Total,	980

* The Grand Traverse Bay, included in this estimate, has a coast line of one hundred and eleven miles; but it is only nine miles across its entrance into the lake.

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To this should be added Green Bay, which has a periphery,

in Wisconsin,	200 m.	
in Michigan,	120 "	
		320
Total,		1,300

To enable the reader to compare this lake with the others, the following table is inserted, from the report of Mr. S. W. Higgins, State Topographer of Michigan:

LAKES.	Mean Length. Miles.	Mean Breadth. Miles.	Mean Depth. Feet.	Elevation above ocean. Feet.	Area in square miles
Lake Superior,	400	80	800	596	32,000
Lake Michigan,	320	70	1,000	578	22,400
Green Bay,	100	20	50	578	2,000
Lake Huron,	240	80	1,000	578	20,400
Lake St. Clair,	20	18	20	570	360
Lake Erie,	240	40	84	565	9,600
Lake Ontario,	180	35	500	232	6,300
					93,060

It is estimated that the water which passes out of Lake Erie is the surplus or drainage of an area of 335,515 square miles; and by recent measurement, which appears to have been made with sufficient regard for accuracy, it is ascertained that the quantity of water passing into the Niagara river at Black Rock, is 22,440,000 cubic feet per minute,* or about eighty and one-eighth cubic miles per annum. This is equivalent to fifteen inches perpendicular depth of water spread over the whole area of the country drained; and therefore something less than half the annual quantity of rain in this portion of the country. From these data, it results that an increase of three inches in the quantity of rain in a year (other circumstances being the same) would cause an increase of 4,488,000 cubic feet per minute at Black Rock, or an annual amount of 2,358,892,800,000

* See Silliman's Journal, for January, 1844.

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cubic feet, and requiring an increased depth of channel at that place, of about five feet, to pass this excess of water. We know, from observations made with care, that such variations in the annual quantity of rain do often occur. Need we therefore wonder that there is a periodical rise and fall of the surface of these lakes? There is an annual change of level resulting from the same cause. In winter, when the supply of water to the lakes is very much diminished, they sink; and during the early part of the summer they attain their greatest elevation, resulting from the melting of snow, and from the spring rains.

The question whether there is a regular tide on the lakes, still remains undecided. That there are strong and variable currents in Lake Michigan, has been known ever since the days of Hennepin; and sailors often discover that, upon casting anchor, their vessels turn around against the wind by the force of this current. This of course will only happen when the wind is light, and in a direction opposed to the current. It is evident that this current cannot be caused by the passage of the waters of the river through the lake, especially in Lake Michigan, which may be considered as a branch, and not a part of the great river that connects the lakes; and besides, the current is as often in a direction up the lake as down it. What then can be the cause of this constant motion of the water? Is it a tidal wave?

It is believed that this phenomenon may be fully accounted for by observing the effects of the storm-winds on the lake. A heavy northeast wind, which is by far the most common, will cause an accumulation of waters at the south end of the lake. This excess of water being acted upon by gravitation, seeks its level, and returns with great force towards the north—hence causing an undulation, or *tide*, which perhaps will continue to ebb and flow until another storm will act upon the lake, and produce the same results, keeping the water in constant motion, and causing it to rise and fall at particular places as much as four feet.

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Wherever any rock is found in places on the immediate shore of this lake, it is invariably limestone, which usually lies near the surface of the water, and never forms high cliffs, like those of the Mississippi river. On the west shore, the rock is covered, from twenty to one hundred feet, by a deposit of clay, and on the east, or Michigan side, it supports about the same depth of loose moving sand. The action of the waves upon the west shore is constantly wearing it away at the base, causing large masses to fall into the water, where it is worn down and deposited in the bottom of the lake. Hence this bank is uniformly as near perpendicular as the nature of the material will admit. It is impossible to climb it, in most places, and it is as often dangerous to approach too near the margin; the earth on which you stand may soon be precipitated a hundred feet into the water of the lake.

While the water is thus wasting away the west shore, it is constantly causing an accumulation of sand on the east shore; which being thrown up by the waves during heavy seas, soon becomes dry, and is carried inland by the action of the winds. This loose sand forms hills, varying in height from ten to one hundred and fifty feet, whose forms are constantly changing by the moving of the sand by the winds; and it is remarked that the sand is gradually encroaching upon the land, and may, unless some sufficient barrier is opposed to its progress, eventually spread over a considerable portion of the State of Michigan.*

Lake Michigan may, therefore, be considered as adopt-

* This kind of calamity is prevented in Holland, by sowing the sand hills or dunes annually, with the seed of a reedy grass (*Arundo arenaria*), which finds in the sand a kind and congenial soil. The roots soon spread, strike deeply into the ground, and so intertwine that the sand is held firmly between them; and as the growth of the grass is luxuriant, the decomposition of its successive crops renders the soil (it is said) sufficiently rich to produce potatoes, and to bear plantations of firs. (See Report of Capt. G. W. Hughes, to the Topographical Bureau, 1843.)

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ing the spirit of the age, and moving to the west! Whether the encroachment on Wisconsin is balanced by the accumulation in Michigan, or whether the lake is increasing or diminishing in width, cannot easily be determined. As the ground rises immediately west of the shore, and is based upon limestone rock, lying at a considerable elevation above the water, it is evident that the progress of the lake in that direction will soon be stopped.

While the Topographers of Ohio and Michigan are able to trace ancient lake beaches around Lake Erie, having an elevation of about one hundred and eight feet above the present surface of the water, we cannot find evidence about Lake Michigan of such ancient elevation, but, on the contrary, there are some facts that tend to show that this lake was once lower than at present. The appearance about the mouths of every considerable stream evinces that they once were lower, wearing their beds some fifteen or twenty feet below the present surface of the water. The subsequent elevation of the lake has caused the water to set back on these rivers, in some cases two or three miles, causing deep pools of "back water," and affording convenient basins for the accommodation of shipping. In what other way could these river beds have been excavated to so great a depth? Surely the slight current at present seen could not have been the cause.

Lake Michigan now discharges its waters through the straits of Mackina (Michillimackinac of older writers) into Lake Huron, but there is abundant evidence that it once flowed south through the valley of the Illinois, and thus contributed to swell the mighty flood of the Father of Waters. It is the opinion of some, that there was once a barrier across the straits of Mackina, and in those ancient days it is probable that Lakes Superior, Huron and Erie, may have been tributary to Lake Michigan, and their accumulated waters were sent down to the valley of the Illinois. Facts well known to geologists prove that there have been

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in former times great changes in the relative elevation of land in different places; some parts having been elevated, while others were depressed. Indeed, this operation is now going on gradually in some parts of the world. May we not, therefore, suppose that similar changes have taken place in the region of these lakes? A depression of the country about the Niagara river of one hundred and eight feet, and an elevation of the northern portions of Illinois of only forty feet, would produce all the changes here indicated. These changes of level would reduce Lake Erie to the original level of Lake Michigan, and at the same time elevate the latter so as to turn its waters into their present course.

The description of Lake Michigan, and the interesting facts connected with it, would not be complete without a notice of the remarkable succession of sand ridges between Chicago and Michigan City, described by Prof. C. U. Shepard:

"On drawing near the head of the lake, by the way of the road to Michigan City, we find the surface of the prairie invaded far inland by a succession of ancient beaches, formed with the utmost regularity as to width and height, as well as conformity to the existing shore of the lake. Leaving Chicago, the road, for about fifteen miles, is on the beach, or just behind it on the border of the level prairie. It then begins to diverge from the shore, and passes obliquely across a succession of ridges, each resembling a turnpike in its rounded form. These ridges are wooded, while the intervals between them consist of wet marsh, or level prairie. Advantage is taken of the ridges, as far as possible, for the course of the road. After proceeding a number of miles in a southeasterly direction, the road takes a south course at right angles to the coast, and runs for a distance of five miles, over about fifty of these ridges. They vary from four to ten rods in width, each one, however, preserving with exact uniformity, its own breadth,

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and separated from each other by intervals of from six to forty rods. When midway between any two beaches, the eye is presented, in opposite directions, with an almost interminable vista, whose bounding lines of trees are perceived to be slightly curvilinear, the curvature of the ridges corresponding exactly to the broad sweep of the lake shore. No visible difference of level is apparent in the beaches, while the marshy prairie between them is so low and sunken as to be almost impassable, and apparently corresponds in level with the prairie in the rear of Chicago.

"At the termination of the above series commences a new order of ridges, all of which are situated at a somewhat higher level. They have an average width of only one hundred and twenty feet, and are separated by depressions of the same dimensions. In these, both the ridge and the valley are dry and wooded. The road crosses them for a distance of one mile, after which, assuming a more easterly course, it descends upon a flat prairie, about three miles wide.

"The succession of beaches described, would appear to have been occasioned by the action of southerly winds, operating on the whole range of the lake, thereby producing an accumulation of water in this region, as well as a strong impulsive action upon the bottom of the lake, from the motion of the sea towards the shore."

This explanation, it is believed, would account very satisfactorily for the formation of a single beach line, and perhaps of an extensive flat of level sandy prairie; but it is difficult to conceive how it should produce a regular succession of such beaches, separated by intervening valleys; so that this matter remains to be hereafter explained.

Lake Michigan is destitute of islands, except a few near its northern extremity, and it is unfortunate for the interests of navigation that it does not present along its shores many deep and narrow bays, or other places of security for vessels during heavy winds. In this respect, however, its

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character is quite similar to the other lakes. Navigation usually commences in the spring about the middle or last of March on this lake; but as the straits of Mackina remain closed with ice after that time, we usually have no arrivals from below until about a month later, as shown by the following statement of the arrival of the first steamboat at Milwaukee, since the first year of their navigating this lake:

In 1837	May 28	James Madison.
1838	April 26	Pennsylvania.
1839	April 30	Columbus.
1840	April 11	Chesapeake.
1841	April 25	Great Western.
1842	March 26	Chesapeake.
1843	May 8	Bunker Hill.
1844	April 10	Missouri.
1845	April 5	Hercules.

Mean or average, April 22—being about the same time that Lake Erie is open at Buffalo. But as that lake is open from Cleveland, and the other points west of Buffalo to its western extremity, about a month before this time, it will be seen, that upon the completion of the railroad through Michigan, and the southern railroad in New York, the merchants of Wisconsin can receive their spring goods, and commence sending off their winter's supply of produce, lead, &c., a month earlier than at present.

We may also look forward to the time, certainly not very distant, when this lake will be navigated during the whole winter.

WALWORTH COUNTY

Is bounded on the north by Milwaukee and Jefferson counties; on the east by Racine; on the south by the State of Illinois; and on the west by Rock county; embracing the townships numbered one, two, three and four, in the ranges numbered fifteen, sixteen, seventeen, and eighteen

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It is, therefore, twenty-four miles square, and contains sixteen townships, or five hundred and seventy-six square miles or sections. It was set off from Milwaukee county in 1836, and organized as a separate county in 1838. The population of this flourishing county was then (1838) one thousand and nineteen. In 1840, it had more than doubled, being two thousand six hundred and eleven; and in 1842, it had almost doubled again, being then four thousand six hundred and eighteen. It is now estimated to be about ten thousand. The county seat is established at Elkhorn, which is exactly at the centre of the county.

This county occupies the high ground, or summit, between the waters of the Pishtaka, which runs through Racine county east of it, and Rock river, which runs through Rock county at the west. It is one of the richest and most important agricultural counties in the Territory; possessing a rich soil, with about the proper proportion of timber and prairie land to suit the convenience and fancy of the first settlers of a new country—hence its rapid settlement. It has no abrupt or steep hills, deep valleys, and but little waste land of any kind. It is well watered by numerous small lakes in the north part of the county, and three larger ones at the south part, and by numerous springs and rivulets. The position of Walworth county, midway between Lake Michigan and Rock river (which will ultimately be made navigable), must render it important, by having a choice of two markets for the surplus produce.

The town system was adopted in this county, and for the purposes of government it is divided into the following towns:

Bloomfield, township one, range eighteen.
Darien, township two, range fifteen.
Delavan, township two, range sixteen, except section one.
East Troy, township four, range eighteen.
Sugar Creek, township three, range sixteen, except section thirty-six.

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GENEVA, township two, range seventeen (except section six), and five acres at the southwest corner of township two in range eighteen.

HUDSON, township two, range eighteen.

LA FAYETTE, township three, range seventeen, except section thirty-one.

LA GRANGE, township four, range sixteen.

LINN, township one, range seventeen.

RICHMOND, township three, range fifteen.

SHARON, township one, range fifteen.

SPRING PRAIRIE, township three, range eighteen.

TROY, township four, range seventeen.

WALWORTH, township one, range sixteen.

WHITEWATER, township four, range fifteen.

ELKHORN, a small town, organized in 1846, embracing four sections around the centre point of the county.

There were in this county in 1840, agreeably to the census, 409 horses, 2,861 neat cattle, 410 sheep, 6,380 swine, 10 stores and groceries, 1 distillery, 3 grist-mills, and 7 saw-mills. The products of 1839, were 59,580 bushels of wheat, 1,499 of barley, 35,155 of oats, 205 of rye, 1,754 of buckwheat, 40,837 of Indian corn, and 42,455 of potatoes, 3,624 tons of hay, and one pound of reeled silk. These statistics will show what crops are usually raised in this county, and the proportion they bear to one another.

Several thriving villages have sprung up in this county, the chief of which are ELKHORN, the county seat, at which there is published a weekly newspaper; WHITEWATER, situated near the northwest corner of the county, having a good water power well improved; GENEVA, at the outlet of Geneva Lake; DELAVAN, and TROY.

There are nineteen post-offices in Walworth county:— at Bigfoot, Darian, Delavan, Elkhorn, East Troy, Fairfield, Geneva, Goodlet, Granville, Heart Prairie, Hudson, Lyonsdale, Round Prairie, Richmond, Sugar Creek, Spring Prairie, Troy, Whitewater, and Walworth.

The principal streams in this county are HONEY CREEK,

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SUGAR CREEK, GENEVA CREEK, which unite to form a branch of the Pishtaka at Burlington; and Turtle creek, and Whitewater, in the western part of the county. Geneva creek is the outlet of a lake of the same name, about twelve miles in length, and affords some valuable water power. Honey creek and Sugar creek rise in range sixteen, and run east parallel with each other about twelve miles, and unite near the east line of the county.

There are twenty-four lakes in Walworth county, all very small, except the three following:

GENEVA LAKE, eight miles long, and a little more than one mile average breadth, covering an area of 5,423 acres, or nearly eight and a half square miles; and having a periphery of nineteen miles. It was formerly called Big foot lake, from some fancied resemblance of its form to that of the human foot. It is supplied mostly from springs, not having any considerable tributary. It is principally in township one, range seventeen, and its longest diameter lies nearly due east and west. Fontana is at the head of this lake, and Geneva is at the foot.

DELAVAN LAKE covers an area of fifteen hundred acres, or nearly two and one-third miles; length, two and a half miles; width, one mile. It is near the source of Turtle creek, a tributary of Rock river, at Beloit.

COMO LAKE lies two miles north of Geneva lake; three and one-eighth miles long; average width nearly half a mile; periphery six and three-fourth miles; and having an area of nine hundred and twenty-four acres.

ROCK COUNTY

Is bounded on the north by Jefferson and Dane; on the east by Walworth; on the west by Green county; and on the south by the State of Illinois: embracing townships one, two, three and four, in ranges ten, eleven, twelve, thirteen and fourteen, being thirty miles long, from east to west, and twenty-four miles wide, showing an area of eight

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hundred and sixty-four square miles. It derives its name from Rock river, which runs through it from north to south near the middle of the county. Rock once formed a part of Milwaukee county, from which it was separated in 1836, and organized in 1839. The population in 1838 was four hundred and eighty; in 1840, it was one thousand seven hundred and one; and in 1842, it was two thousand eight hundred and sixty-seven. It is now estimated at seven thousand.

The county seat is at JANESVILLE, a flourishing village with about one thousand inhabitants, situated on the east side of Rock river, at the southeast corner of township three, range twelve, being near the centre of the county. It is situated on a flat, or level, about two hundred yards wide, between the river and the foot of the bluffs, which are about one hundred feet high. The court-house is erected on the bluff, giving it a very prominent appearance. Janesville is the point at which much of the trade between the eastern and western portions of the Territory crosses Rock river, and a bridge is now erected for its accommodation. The distance from Janesville to Milwaukee is sixty-five miles, and it is the same to Racine; giving the citizens a choice of two ports on Lake Mickigan, which can be reached in the same distance. Janesville is 13 miles from Beloit, 41 from Madison, 31 from Monroe, and about 80 from Mineral Point. A company has been incorporated to construct a railroad from this place to the lake shore.

A very valuable water power has been created here by the construction of a dam across the river.

BELOIT is situated on a beautiful plain, on the east side of Rock river, near the south line of the Territory, and immediately above the mouth of Turtle creek, a considerable stream, affording a valuable water power within the limits of the town. On one side of the town the ground rises abruptly some fifty or sixty feet, affording very beautiful sites for residences, commanding a view of the town, the

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river, &c. In 1843, Beloit contained seven hundred and forty-five inhabitants, and it is now estimated to contain about twelve hundred.

The water power here has recently been increased by the construction of a dam across Rock river. There are two large flouring mills in operation here, one of them built of grey limestone; and this is also the material used in the construction of the Congregational Church, which is represented as one of the most beautiful churches in Wisconsin. A Seminary was incorporated here in 1837, and a manufacturing company in 1839. The society at this place is represented as excellent, for intelligence, morality and religion.

A college is about to be established at this place under the supervision of the Congregational and Presbyterian Churches; it was incorporated in January, 1846.

Beloit was incorporated in 1845.

ROCKPORT is the oldest village or settlement in the county, having been commenced in 1836. It is on the west side of Rock river, half a mile below Janesville, and at the head of a rapid, having about seven feet fall in a distance of one and a half miles.

Post-offices have been established in Rock county at the following places: Beloit, Janesville, Johnstown, Milton, Union and Warren.

The land in this county, on the west side of Rock river, was offered for sale at Green Bay, in 1835, during the wild rage for speculation in lands, and much of it was then sold to speculators, who hold it with the hope of an increased value, and without making improvements, or occupying the land. The best locations being thus taken up, this part of the county has been but little settled, although it presents many inducements for the farmer. East of Rock river the lands were occupied, to a considerable extent, before they were brought into market by the government, and consequently have fallen into the hands of actual settlers, and been improved and occupied for useful purposes.

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This part of the county is, however, almost one continued prairie, that portion not represented on the maps as such being but slightly covered with trees or bushes. This great prairie, the largest in the Territory, is known as Rock Prairie. The eastern portion of the county is based on limestone; towards Sugar river, red sandstone is found.

Agreeably to the census, there were in 1840, in this county, 389 horses, 1,804 neat cattle, 131 sheep, 3,560 swine, 1 distillery, 2 grist-mills and 5 saw-mills; and the produce of the preceding year is stated at 24,702 bushels of wheat, 312 of barley, 21,990 of oats, 483 of rye, 741 of buckwheat, 31,329 of Indian corn, and 28,605 of potatoes; 2,089 tons of hay, and 1,400 pounds of maple sugar.

LAKE KOSHKONONG, which lies principally in Jefferson county, extends a short distance into Rock; and there are twelve small lakes in the county—none of them, however, exceeding a mile in length. DEER LAKE, on section twenty, in township four, range thirteen, is about a mile long, and covers eighty-seven acres.

The following towns have been established in this county by the legislature, the town system of government having been adopted by a vote of the people:

BELOIT, township one, in range twelve.

BRADFORD, township two, in range fourteen.

CENTRE, townships two and three, in range eleven.

CLINTON—township one, in range fourteen.

FULTON, township four, in range fourteen.

JANESVILLE, township three, in ranges twelve and thirteen, and the north half of township two in range thirteen.

JOHNSTOWN, township three, in range fourteen.

LIMA, township four, in range fourteen.

MAGNOLIA, township three, in range ten.

MILTON, township four, in range thirteen.

NEWARK, township one, in ranges ten and eleven.

OAK, township four, in range eleven, except sections six, seven, eighteen, and the west half of sections five, eight, and seventeen.

ROCK, township two, in range twelve.

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SPRING VALLEY, township two, in range ten.
TURTLE, township one, and south half of two in range thirteen.
UNION, township four, in range ten, and part of range eleven.

JEFFERSON COUNTY.

It is bounded on the north by Dodge county; east by Milwaukee; south by Walworth and Rock counties; and west by Dane. It is twenty-four miles square, or four townships wide, and four long—being townships five, six, seven and eight, in ranges thirteen, fourteen, fifteen and sixteen. Its area is, therefore, five hundred and seventy-six square miles. The county seat is at Jefferson, near the "forks" of Rock river, and very near the centre of the county. It was set off from Milwaukee county in 1836, and organized as a separate county in 1839. The population of Jefferson county, in 1838, two years after the first settlement was commenced, was four hundred and sixty-eight; in 1840, it had increased to nine hundred and fourteen; and in 1842, to one thousand six hundred and thirty-eight. It may now be safely estimated at five thousand.

That portion of the county lying east of Rock river, and north of Bark river, is covered with timber, among which may be found some of the finest trees in the Territory; the remainder of the county is "openings," except a few square miles near the Whitewater and Scupernong, which are prairie. Within the timbered district there is a remarkable series of ridges running north and south, and crossed by the United States road. In a distance of about nine miles, extending through range fifteen and the west half of fourteen, the road crosses no less than sixteen of these parallel ridges and intervening valleys, averaging, therefore, about half a mile apart. There is usually a narrow swamp between them, covered with black ash or tamarack trees. They extend from two to five miles, in a north and south direction, and are gradually attenuated at each extremity. Along Bark river, immediately south of these

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ridges, there are some extensive marshes, which once, probably, formed the bottom of a large lake. Other portions of Jefferson county are more gently rolling, or level. There is much excellent farming land in this county, especially along the rivers; and Rock river valley maintains here the high reputation which it so deservedly has further south.

The geographical position of this county, lying in the direct route between Milwaukee, the principal port on Lake Michigan, and the capital of the Territory, is believed to afford it some advantages; and with all her other advantages and sources of wealth, we cannot but anticipate the time when Jefferson will be known as one of the principal counties. The inhabitants are industrious, enterprising and public-spirited; as is evinced by the fact that, in one year, six bridges were built across Rock river and its main branch.

The statistics collected in 1840, show 100 horses, 1,045 neat cattle, 32 sheep, 1,763 hogs, 1 store, and 4 saw-mills. The products of 1839 were, 6,647 bushels of wheat, 406 of barley, 4,465 of oats, 186 of rye, 118 of buckwheat, 15,192 of Indian corn, 14,410 of potatoes, 1,820 tons of hay, 13,050 pounds of maple sugar, and fifteen thousand seven hundred and eighty dollars worth of lumber.

The village of Aztalan is situated on the west bank of the West Branch, on the United States road leading from Milwaukee to the Mississippi, by way of Madison—distant from Milwaukee about fifty miles, and from Madison thirty. It is very prettily situated, on the sloping bank of the river, immediately above the "ancient city" from which it derives its name.

This ancient artificial earthwork, consists of an oblong enclosure, about five hundred and fifty yards in length, and two hundred and seventy-five yards in breadth, lying along the bank of the river. The walls are twenty-three feet wide at the base, and four or five feet high, having (except on the river side) an exterior semicircular enlargement, or buttress, and a corresponding interior recess every twenty-

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seven yards. In some parts of the wall, and especially in the buttresses, the earth of which it is composed appears to have been mixed with straw, and burned in such manner as to resemble slightly burnt brick. There is no evidence that this substance was ever moulded into regular form. Within this enclosure are several remarkable mounds and excavations, and an unusual number of mounds (many of them very large) are found in the immediate vicinity, indicating that this spot was once occupied by a very numerous population, which continued to reside here for a great length of time. The place described as the "termination of a sewer about three feet below the surface, and arched with stone," appears to be not a regular arch, nor even a sewer. It is remarked, that we have yet no evidence that the ancient inhabitants of this continent were acquainted with the nature and properties of an arch. Aztalan, according to Humboldt, is the ancient name of the country from which the people of Mexico called Azteeks, emigrated; and this is described as lying far to the north. Hence a little fancy only is necessary to locate this country in Wisconsin, and at the place where the ancient works appear to be most extensive and interesting. These works were first explored, and a description of them published in 1836, by N. F. Hyer, Esq.

JEFFERSON is situated on the east side of the river, a short distance above the junction of the West Branch, and contains a tavern, store, mechanic's shop, and numerous dwellings. A dam has been constructed across the river, causing a valuable water power, on which a saw-mill has been erected. The western termination of the Milwaukee and Rock River Canal, as located, is a short distance above this village.

The village of Watertown is situated on Rock river, near the great bend, and at the foot of Johnson's rapids, where a dam across the river creates one of the most valuable water privileges in the country. The improvements are on

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both sides of the river, which is from two hundred to four hundred feet wide, and bordered by steep banks of limestone rock. The descent on these rapids is twenty-four and one-fourth feet; and the dam creates a head of about nine and a half feet. The population of Watertown is about five hundred, and no town in this part of the territory is improving more rapidly than this.

Fort Atkinson is a thriving village, situated on both sides of Rock river, at the north part of this town, and immediately below the mouth of Bark river. It is understood that a temporary fort was erected here during the Black Hawk war; hence the name.

Lake Mills is the name of a village commenced on the east side of Rock Lake. Mills have been erected here, the water power being created by raising the surface of the lake.

There are two large and ten small lakes in Jefferson county; Lake Koshkonong being the largest. This lake may be considered as an expansion of Rock river; eight miles long, two and five-eighths miles average width, occupying an area of twenty-one sections or square miles, and having a periphery, measuring all the sinuosities of the shore, of twenty-eight and three-fourths miles. Immediately at the entrance of the lake, there is a rapid current extending six hundred feet into the lake, with only from two to three feet depth of water. Through the remainder of the lake, on the usual channel or track for boats and rafts, the water is from four to twelve feet deep.

Rock lake is two miles and three quarters long, one mile and a quarter wide, and covers an area of sixteen hundred and fifty-three acres, or a little over two and a half sections. Its name is derived from the unusual number of rocks along the shore, thrown up by the expansion of ice in winter, into a ridge, in many places several feet in height. It discharges its waters through a small stream in a northeasterly direction in the west branch. The shores of this lake are high, and present a beautiful prospect to the eye.

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RIPLEY LAKE, in Oakland, occupies parts of sections five, six and seven; is a mile and a half long, and occupies an area of four hundred and ninety-three acres. The coast line around it, is four miles and three-eighths.

RED CEDAR LAKE lies one mile south of Ripley lake; one and a fourth miles long, five and a fourth around; has a very irregular form, and covers an area of five hundred and nine acres. It discharges its waters into Lake Koshkonong.

CRANBERRY LAKE is in sections twenty-two, twenty-three, and twenty-seven, in township seven, and range sixteen; about which an abundance of cranberries were found when surveying the canal through this region.

Jefferson county is peculiarly favored as it regards rivers. ROCK RIVER runs in every direction in passing through it—entering at the northeast corner, and leaving it at the southwest corner; and the WEST BRANCH, or Crawfish, almost equal in size to Rock river itself, runs more than half way through the county before it unites with the main river. The OCONOMEWOC, a considerable stream, the outlet of a series of small lakes in Milwaukee county, runs nearly through the town of Union, and then unites with Rock river. JOHNSON'S CREEK is a small stream, affording water sufficient to propel a saw-mill, at a point on the United States road. The KOSHKONONG CREEK runs near the west line of the county, partly in this and partly in Dane counties. The SCUPERNONG and WHITEWATER are two important branches of BARK river; and Bark river is here a considerable stream, affording water power. The Indian name of this river is Onakick, or "Peel-bark" river. It rises in Washington county, and passing through the northwest part of Milwaukee county, enters Rock river at Fort Atkinson, six miles above Lake Koshkonong. A part of its course is through some extensive marshes, where it is occasionally lost in the tall grass. Its source is on very elevated ground, so that it may be used in supplying the summit level of a canal across the country in this direction.

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The CRAWFISH, or West Branch of Rock river, rises near the northwest corner of Dodge county, where it receives the waters of Fox lake, and runs directly south, being confined almost exclusively to one range of townships (range fourteen). "In ascending this branch from its mouth, at Jefferson," says Capt. Cram, in his report, "the minimum depth of water for six miles, is believed to be not less than four feet in low stages. About one and a half miles above Aztalan there is a rapid of about two and a half feet fall in half a mile. On this rapid, during the lowest stages of water, the depth is not over ten inches. Above this rapid the stream is tranquil, and has a depth of five feet for about ten miles; above which there occurs a series of rapids with only about ten inches of water for half a mile. There is an abundance of water in the Crawfish for all purposes of navigation, and there is no doubt of its being susceptible of being improved within moderate limits of expense."

Post-offices have been established at the fifteen following places in Jefferson county: Aztalan, Cold Spring, Fort Atkinson, Littleton, Union Centre, Watertown, Farmington, Jefferson, Koshkonong, Oakland, Palmyra, Pamelia Four Corners, and Bark-River.

The town system is adopted, and the county is divided into ten towns as follows:

KOSHKONG—township five, in ranges thirteen and fourteen.

BARK RIVER—township five, and south half of six in range fifteen.

SULLIVAN—township five, and south half of six in range sixteen.

OAKLAND—townships six, in range thirteen.

JEFFERSON—township six, in range fourteen, and the north half of six in ranges fifteen and sixteen.

LAKE MILLS—townships seven and eight, in range thirteen.

AZTALAN—townships seven and west half of eight, in range fourteen.

WATERTOWN—townships seven and eight, in range fifteen, and the east half of eight in fourteen.

CONCORD—township seven, in range sixteen.

IXONIA—township eight, in range sixteen

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DODGE COUNTY.

So named in honor of General Henry Dodge, first Governor of Wisconsin, is bounded on the north by Fond du Lac; on the east by Sheboygan and Washington; on the south by Milwaukee and Jefferson; on the west by Dane and Columbia counties. It is five townships, or thirty miles square, embracing townships, numbered nine to thirteen, in ranges numbered thirteen to seventeen, all inclusive. Its area is nine hundred square miles, or five hundred and seventy-six thousand acres. Dodge was set off from Brown county, in 1836, and organized as a separate county in 1840; and organized for judicial purposes in 1845. In 1838 it had a population amounting to eighteen, and in 1842 it had increased to one hundred and forty-nine; but such has been the rapid settlement of the county that the population is now estimated at five thousand.

In 1840, there were in Dodge county, 40 horses, 150 neat cattle, 105 swine; and the produce of the preceding year is stated to be 2,100 bushels of oats, 2,000 of Indian corn, 2,425 of potatoes, 500 tons of hay, and five hundred dollars worth of skins and furs.

There are five lakes in Dodge county. The largest is

Fox lake, lying in the northwest corner township; about three miles long and two wide, and forming the source of the Crawfish river. It has nearly a regular oval form, and a small island towards the east end.

Lake Emily is two and a half miles northwest from Fox lake, and is only about three-fourths of a mile in length.

The Winnebago marsh, lying on Rock River, near its source, is principally in this county, and is, perhaps, the most extensive marsh in Wisconsin, being fourteen miles long, five and a half wide, and covering an area of forty-four square miles. The river, in passing through it, is often divided into several channels, and sometimes it is almost impossible to trace it through the high rank grass, &c., with

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which the marsh is covered. It occupies parts of townships twelve, thirteen and fourteen, in ranges fifteen and sixteen.

Rock river enters Dodge county near the head of the Winnebago marsh, and runs in a direction almost due south through the county, and is here navigable, with the exception of a distance of about three-fourths of a mile at Hustis' rapids, where there is a fall of nearly seven feet, requiring improvement, and affording a water power of great force and value. Hustis rapids are about twelve miles below the marsh. The bottom of the river here affords excellent foundations, and good materials for improvement are found near by.

Beaver Dam river, the outlet of Fox Lake, runs parallel to Rock river, and about twelve miles west of it. This stream also runs through the county, from north to south.

Ossin river, sometimes, but improperly, called Rock river, rises in Washington county, and running westward with a remarkably crooked course, enters Rock river in township twelve, near the foot of the Winnebago marsh.

The Rubicon is another branch of Rock river, which rises in a small lake near the Musquewoc lake, in Washington county, and running west, enters Rock river three miles below Hustis' rapids.

The following remarks relative to Dodge county were written by the intelligent editor of the Milwaukee Democrat, in 1843.

"This county is situated in the interior, midway between Wisconsin river and Lakes Michigan and Winnebago, and at present contains more choice locations for farms than can be found in any other county in Wisconsin. The Rock river runs through the eastern part of Dodge, and expanded in the Winnebago marsh, becomes navigable for any boats that ever may be made to pass on this stream, to within about fifteen miles of Lake Winnebago. The western portion of the county is watered by the Crawfish and Beaver

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dam creeks, on each of which extensive water power may be created. Good wells have been obtained at the depth of twenty feet, in nearly every part of the county; and springs, and spring brooks, are more abundant than in any other portion of Wisconsin. The larger streams are skirted by groves of thick and heavy timber, consisting of oak, sugar, linn, elm, ash, butternut, hickory and walnut; while the smaller streams run through the choicest tracts of burr oak openings and prairies, interspersed with valuable thickets of pin oaks, which will furnish farmers in their neighborhood with an excellent and plentiful supply of rail timber. Excepting the Winnebago marsh, there is scarcely any land in the whole county (thirty miles square) which cannot be cultivated. Several causes have hitherto operated to prevent the settlement of this district. Its inaccessibility from the lake shore, because of the want of roads, may be stated as one cause, while another is to be found in the fact that one-half of this county is in the northern land district, and must be entered at Green Bay, which is even more inaccessible from that region than Milwaukee. Until the present year, so far as public notoriety extended, Dodge county has been left a *terra incognita*. Three years since, Mr. Hyland opened a wagon road from Watertown to the centre of the county, and settled on a small prairie which bears his name, whither he was followed by a sufficient number of industrious farmers to occupy not only the whole of the prairie, but every quarter section adjoining the road opened by this hardy pioneer. About the same time six families moved from Fox lake, ten miles down the Beaver Dam, and made a settlement, to which they gave the name of that stream. This settlement now contains twenty-five or thirty families. A saw-mill is in successful operation, and preparations are making to build a flouring-mill on the same dam during the coming year. The stream, which will yield an abundant supply of water, and which at this point has between twenty and thirty feet

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fall within three-fourths of a mile, may be successfully and easily used to any extent in driving machinery. Between Hyland's and Beaver Dam, are Rising and Slawson's prairies, on which are thriving settlements. The settlement at Fox lake, which was commenced four or five years since under the auspices of Mr. H. Stevens, has languished from its remote distance in the northwest corner township, and from the injudicious entries by non-residents, rather than from any want of choice and superior farming locations. There are, however, several substantial farmers in the Fox lake and Lake Emily region, and the prospect now is, that this inviting part of Dodge county will receive a new impetus to its settlement. All these settlements are made by immigrants from the eastern states; and not to exceed thirty sections of land in the county are in the hands of non-residents."

So far as the rocks have been exposed to view, limestone is found to prevail, and usually of an excellent quality for building purposes.

There are six post-offices already established in this county, which only three years since contained less than a hundred and fifty inhabitants: at Beaver Dam, Fox lake, Lake Emily, Lake Marie, Oak Grove and Waushara.

The rapidity with which this county has been settled and improved within the last three years is truly surprising, even to those who are familiar with similar occurrences in the western country. Villages have sprung up, roads have been opened and improved, water privileges have been occupied, and new clearings commenced in all parts of the county.

The township system of government has been adopted, and the county is divided into nineteen towns, as follows:

ASHIPPUN, township nine, in range seventeen.

BEAVER DAM, township eleven and the south half of twelve, in range fourteen.

BURNETT, township twelve, in range fifteen.

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CLYMAN, township ten, in range fifteen.

CHESTER, township thirteen, in ranges fifteen and sixteen.

CALMUS, township eleven and south half of twelve, in range thirteen.

EMMETT, township nine, in ranges fourteen and fifteen.

ELBA, township ten, in range thirteen.

FAIRFIELD, township eleven, in range fifteen.

FOX LAKE, township thirteen and north half of twelve, in range thirteen.

HUSTISFORD, township ten, in range sixteen.

HUBBARD, township eleven, in ranges sixteen and seventeen.

LEBANON, township nine, in range sixteen.

LOWELL, township ten, in range fourteen.

LE ROY, township twelve and thirteen, in range seventeen

PORTLAND, township nine, range thirteen.

RUBICON, township ten, in range seventeen.

TRENTON, township thirteen and north half of twelve, in range fourteen.

WILLIAMSTOWN, township twelve, in range sixteen.

ROCK RIVER

Rises a few miles west of Fond du Lac, and running in a south and southeasterly direction, enters the Mississippi in the State of Illinois, one hundred and sixty-five miles below the south line of Wisconsin. It derives its name from some rocks near the mouth, seen in passing on the Mississippi, and not from its being more rocky than any other of the western rivers. The "Rock river country" is very favorably known for its fertility of soil, healthfulness, and for the beauty of its natural scenery. The numerous remains of an ancient people, and of their works, found in its vicinity, indicate that this celebrity is not of recent date. This river may, at very moderate expense, be rendered navigable for small steamboats. The only obstructions within this Territory are at four rapids, requiring locks and dams, and about ten bars or shallow places, of inconsiderable extent. The following table shows the extent and fall on these rapids, the distance along the river

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from place to place, and the total elevation of each place above Lake Michigan, commencing at the mouth of Doty's river, near the north line of Dodge county, which is the head of natural navigation, and only eighteen miles from the southern extremity of Lake Winnebago:

PLACES.	DISTANCE. Miles.	DESCENT. Feet.	ELEVATION. Feet.
Mouth of Doty's river			316
Outlet of Winnebago marsh	12½	6.000	310
Head of Hustis' rapids	12¼	15.000	295
Foot of Hustis' rapids	¾	6.925	288
Opposite La Belle lake	27¼	31.075	257
Head of Peck's rapids	9	9.000	248
Head of mill pond	9	23.659	224
Foot of Johnson's rapids	2⅛	24.237	200
Jefferson	18	14.104	186
Foot of Lake Koshkonong	19½	11.000	175
Mouth of Crawfish	11½	12.000	163
Head of Holmes' rapids	12	12.000	131
Foot of Holmes' rapids	1½	6.925	144
State line of Illinois	16	16.075	128
Junction with Mississippi	165	191.000	—63
Total	316	379.000	

The whole estimated cost of improving the lower division of this river, from the State line to the mouth, is only one hundred and fifty thousand dollars. The principal obstructions are at what are called the Upper and the Lower rapids, the former having a descent of eight feet, and the latter six.

It has been proposed to connect the head waters of Rock river and Lake Winnebago, by means of a canal—and Capt. Cram, an officer of the Topographical Engineers, reports in relation to it, that, "judging from observations on the ground, unaided by the level, between the head waters of Rock river and those which seek the southern extremity of Lake Winnebago, it is inferred that a canal might be opened so as to draw water from the lake as a reservoir

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into the river." That this inference is very far from correct, is shown by statements made in the reports of the same officer. The level of Rock river is stated by him, at a point some distance below Johnson's rapids, to be one hundred and eighty feet above Lake Michigan. To this should be added those rapids and two others above, and also for the descent of the river between the rapids, about one hundred and thirty-six feet, making the elevation of the head of Rock river three hundred and sixteen feet above Lake Michigan. But Lake Winnebago is stated by Capt. Cram to be only about one hundred and sixty feet above Lake Michigan, so that in order to make its waters run down Rock river, a "deep cut" must be excavated one hundred and sixty-feet deep, and extend from the lake nearly to the Illinois State line! That a canal may be made here, is perhaps true; but that some source for the supply of water, other than Lake Winnebago, must be found, is also true.

The branches of Rock river in Wisconsin are, Doty's river, in Fond du Lac county; Ossin, and Rubicon, in Dodge county; Oconomewoc, Crawfish, Bark river, Johnson's creek and Koshkonong creek, in Jefferson county; and the Catfish and Turtle creek, in Rock county. The Pekatonica is a considerable branch, that enters five and a half miles below the State line.

Small steamboats have ascended this river as far as Jefferson: and in 1841, a small steamboat was built at Aztalan, and sent down the river. But until improved, its value for navigation will be principally confined to floating lumber, &c., down the stream.

FOND DU LAC COUNTY

Is bounded on the north by Winnebago and Calumet counties; on the east by Sheboygan; on the south by Washington and Dodge; and on the west by Marquette county: or, to trace the boundaries, we may begin at the

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northwest corner of township seventeen, in range fourteen, and running thence east to Lake Winnebago; thence across that lake in a northeasterly direction, to the south boundary of the Indian reservation; thence east to the east line of range nineteen; thence south twenty-seven miles, to the south line of township thirteen; thence west twelve miles; and thence north eighteen miles, to the place of beginning. It is thirty-six miles long, from east to west, and twenty-seven miles wide, in the widest place. The superficial extent of the county is seven hundred and fifty-four square miles, of which thirty-six are covered by the waters of Lake Winnebago.

This county was set off from Brown, in 1836, and organized as a separate county in 1839. For judicial purposes it was organized in 1844.

Its population in 1840 was one hundred and thirty-nine; in 1842 it was two hundred and ninety-three; and there has been a very considerable increase since that time, so that it is now estimated at not less than eighteen hundred.

There were in Fond du Lac county, in 1840, agreeably to the census, 21 horses, 355 neat cattle, 208 swine, and one saw-mill. The products of 1839 were 320 bushels of wheat, 1,315 of oats, 73 of buckwheat, 1,918 of Indian corn, 3,961 of potatoes, 353 pounds of wax, 925 tons of hay, and 3,220 pounds of maple sugar.

A high and steep ledge of limestone rock extends through the county from northeast to southwest, running along the east side of Lake Winnebago, which appears to be the dividing line between the heavily timbered land on the east, and the prairie and open land forming the west part of the county. The "Military road" from Green Bay to the Mississippi, runs around the south end of the lake, and recently roads have been opened from this point to Milwaukee and Sheboygan, thus affording the citizens of Fond du Lac a choice of lake ports at which to transact their commercial business.

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The village of FOND DU LAC was laid out as early as 1835, by the "Fond du Lac Company," on the Soocherah or Fond du Lac river, at the site of an old village of the Winnebago Indians. Its situation is beautiful, on land gradually rising from the lake, with scattered groves and clumps of trees. It is sixty-four miles from Milwaukee, and sixty from Green Bay. The Soocherah is navigable nearly two miles from its mouth, at which point it receives the Seven Mile Creek from the west: above it runs with a rapid current, between high banks. The proposed connection (by means of a canal) with Rock river, will be along the valley of this stream.

The village of TAYCHEEDA, situated near the south-east angle of Lake Winnebago, has sprung up within a few years, and now bids fair to outstrip all the other places in the county. An extensive mercantile establishment, tavern, and numerous handsome dwellings, with several mechanics' shops constitute the embryo town.

CERESCO is the name of a town established in this county by an association under the system of Fourier, called the "Wisconsin Phalanx." It was commenced by twenty-five persons on the 26th day of May, 1844, and now contains a population of about two hundred.

Mr. W. Chase, one of the members, in a letter recently published, gives the following facts relating to this interesting experiment:

"We are under the township government, organized similar to the system in New York. Our town was set off and organized last winter, by the Legislature, at which time the Association was also incorporated as a joint-stock company by a charter, which is our constitution. We had a post-office and mail, weekly, within forty days of our commencement; thus far we have obtained all we have asked for.

"We have religious meetings and Sabbath schools, conducted by members of some half a dozen different denominations of Christians, with whom creeds and modes of faith are of minor importance,

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compared with religion. All are protected, and all is harmony in that department.

"The Phalanx has a title from government to 1440 acres of land, on which there is one of the best water-powers in the country, a saw-mill in operation, a grist-mill building, 640 acres under improvement, 400 of which are now seeding to winter wheat; we raised about fifteen hundred bushels the past season, which is sufficient for our next year's bread—have about seventy acres of corn on the ground, which looks well, and other crops in proportion. Our property is entirely unencumbered, the society free from debt, and we have an abundance of cattle, horses, crops, and provisions, for the wants of our present numbers, and physical energy enough to obtain more. Thus, you see, we are tolerably independent, and we intend to remain so, as we admit none as members who have not sufficient physical strength to warrant their not being a burthen to the society. We have one dwelling-house nearly finished, in which reside twenty families, with a long hall conducting to the dining-room, where all who are able dine together. We intend to erect another, for twenty families more, next summer, with a hall conducting to another dining-room, supplied from the same cook-room.

"We have one school constantly, but have as yet been unable to do much towards improving that department.

"We have a well regulated system of *Grouping* our laborers, but have not yet organized the *Series*. We have no difficulty in any department of our business, and thus far, more than our most sanguine expectations have been realized.

"We commenced with a determination to avoid all debts, and have thus far adhered to our text; for we believed debt would disband more Associations than any other one cause, and thus far I believe it *has*, more than all other causes put together.

"Most of our land is prairie, interspersed with groves of oak, maple, poplar, rosewood, &c., and an abundance of springs, and quarries of lime, and rock, and occasionally, with the old red sandstone. We are situated ninety miles north of the State line of Illinois, and sixty west of Sheboygan on Lake Michigan, ten south of the navigable waters of Upper Fox River, and twenty west of Lake Winnebago."

CALUMETVILLE is a village commenced in 1834 by some

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German emigrants on Lake Winnebago, nine miles from Taycheeda.

There are four post-offices in this county: Ceresco, Fond du Lac, Waupun, and Taycheeda.

In the eastern range of townships there are nine small lakes, only two of which are named on the maps—Crooked Lake, on section fifteen, township thirteen, range nineteen; and Long Lake, in township fourteen, which is two and a fourth miles long, and only half a mile wide.

The town system of government has been adopted in this county, and the towns organized are:

CALUMET, townships sixteen and seventeen, east of Lake Winnebago.

CERESCO, township sixteen, in range fourteen.

LIME, township fourteen, in range sixteen.

MOTEMON, township fourteen, in range fourteen.

ROSENDALE, township sixteen and the north half of fifteen in range fifteen, and the west half of sixteen.

WAUPUN, township fifteen in range fourteen, and township fourteen, and the south half of fifteen, in range fifteen.

FOND DU LAC embraces the remainder of the county.

CALUMET COUNTY

Is bounded on the north by Brown, east by Manitowoc, south by Sheboygan and Fond du Lac, and on the west by Winnebago counties; or on the north by the line between townships twenty and twenty-one; on the south by the line between townships sixteen and seventeen (in range twenty-one) and the south line of the Indian reservation, produced into Lake Winnebago; and on the west by the line between ranges seventeen and eighteen. It is twenty-four miles long from north to south, and eighteen miles wide. The area is three hundred and ninety-six square miles, including about eighty-one miles of the water of lake Winnebago.

Calumet county was set off from Brown, in 1836, and organized as a separate county in 1842; but in 1843 it was

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reduced to the grade of a town, and made part of Fond du Lac county, under the name of Manchester. It is now restored to its former dignity, but remains attached to Fond du Lac county for judicial purposes.

The population, in 1840, was two hundred and seventy-five; in 1842, it was four hundred and seven. It is now estimated at eight hundred.

This county embraces the Stockbridge and Brother-town Indian reservation, whose farms, with their neat houses, substantial fences and well cultivated fields, will compare favorably with those belonging to other farmers of this country. They constitute a majority of the inhabitants of the county.

A high rocky ridge runs through the county, nearly parallel with the lake shore, from the east side of which the Sheboygan and Manitowoc rivers take their rise; and through one or the other of these valleys, a very direct communication with Lake Michigan may at no distant day be opened by the construction of a railroad or canal. The soil in this county is rich, and well covered with timber, of which basswood constitutes an unusually large proportion. The rocks found in this place are limestone and occasionally sandstone; and there are said to be some indications of coal. The scenery, especially about the lake, is described as very beautiful and picturesque.

According to the census of 1840, there were then in Calumet county, 16 horses, 255 neat cattle, and 438 swine; and the products of 1839 are stated at 1,192 bushels of wheat, 194 of barley, 432 of oats, 2,619 of Indian corn, 3,803 of potatoes, and 231 tons of hay.

There are two very small lakes in this county.

The post-offices established are three; at Calumet, Pequot, and Stockbridge.

The only streams of any considerable size are the north and south branches of the Manitowoc, which run in nearly opposite directions, and unite near the east line of this county.

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The township system of government is adopted.

All north of the division between the two reservations is in the town of Stockbridge, and all south of that line in the town of Manchester.

WINNEBAGO COUNTY

Is bounded on the north by Brown, or north line of township twenty; on the east by Calumet, or east line of range seventeen; on the south by Fond du Lac, or south line of township seventeen; and on the west by Marquette and Brown counties, or by the west line of range fourteen. It is a regular square of twenty-four miles each way, and containing, therefore, five hundred and seventy-six square miles, from which, however, we may deduct, as covered with water, as follows:

By Lake Winnebago,	90 miles.
Pewaugonee Lake,	21 "
Great Butte des Morts,	7 "
Little Butte des Morts,	4 "
Rush Lake,	5 "
Total,	127

Winnebago county was separated from Brown and Fond du Lac counties in 1840, and organized for county purposes in 1842. In 1840, its population was one hundred and thirty-five; and in 1842, it had only increased to one hundred and forty-three. It is now supposed to be about five hundred.

The situation of this county, on the Neenah river, at the junction of Wolf river, a large stream which must at some future day bring down a large surplus of agricultural products, and being bounded on Lake Winnebago, one of the most beautiful and interesting, as well as the largest of the interior lakes of the Territory, must render it as important as many other counties. The character of the soil, timber-prairies, water, and other things usually considered in making a selection of a new home in the West, will compare

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favorably with any other county in the Territory. The underlying rock is limestone.

The ancient struggle between the French and the Sauk and Fox Indians, by which the former sought to secure a free passage across the country to the Mississippi river, was terminated by a decisive action which took place in this county, as described in this work, page 21.

There are three post-offices: at Oshkosh, Buttes des Morts, and Neenah.

In 1840, agreeably to the census, there were in Winnebago county 39 horses, 184 neat cattle, 147 swine, 1 grist-mill, and 1 saw-mill. In 1839, the products were 362 bushels of wheat, 445 of oats, 21 of buckwheat, 1,090 of Indian corn, 1,980 of potatoes, 209 tons of hay, 4,400 pounds of maple sugar, 3 barrels of fish, $8,950 worth of skins and furs, and 15 pounds of tobacco.

The county seat is at OSHKOSH, at the entrance of the Neenah into Lake Winnebago.

LAKE WINNEBAGO, from which this county derives its name, is twenty-eight miles long, and ten miles wide, in its greatest dimensions, and covers an area of about two hundred and twelve square miles. The Neenah river enters it near the middle, and leaves it at the northwest angle, by two channels, enclosing Doty's island, by which it is connected with the Little Butte des Morts lake. These channels are known as the Winnebago rapids. "The water," says Capt. Cram, "is hard, and when not violently agitated is quite pellucid, but becomes turbid during long and severe blows; and has a depth sufficient for the purposes of navigation. On the northern extremity the shore is low, having a narrow sandy beach, for an extent of about eight miles. On the east side the shore presents a remarkable feature for an extent of fifteen miles, in a wall composed of rocks laid together, as if placed there by the hand of art. A similar wall pertains to portions of the western shore, but with less continuity than is observed on the east shore. The wall generally

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rises about five feet above, and extends into the lake under the water, for some hundreds of feet. Above the wall on the east side, there immediately succeeds a table of excellent land, covered with a growth of heavy timber; and still further back the ground rises into a high ridge, in which limestone and sandstone are found in great abundance. On approaching the southern extremity of the lake, however, the stone and timber disappear, and the land becomes a rich grassy prairie, coming quite to the water's edge." The wall above described probably owes its origin to the expansive force of the ice in winter, by which the rocks in the shallow water near the shore are annually moved towards the shore, until they are finally thrown up into a ridge or wall, as is seen on the Pewaukee, and other lakes in Milwaukee county. There is a small island (about a mile in length) near the west shore, called Garlic island. For the protection of navigation on this lake a pier has been commenced under the authority of Congress, at Clifton, near the northern extremity of Lake Winnebago, for which an appropriation of five hundred dollars was made. It is estimated by Capt. Cram that the surface of this lake is about one hundred and sixty feet above the level of Lake Michigan.

PEWAUGONEE LAKE is an expansion of Wolf river, about ten miles in length, commencing a short distance above its junction with the Neenah.

GREAT BUTTE DES MORTS LAKE is an expansion of the Neenah river, four and a half miles above Lake Winnebago; three and a half miles in length, and from one to two miles in breadth.

LITTLE BUTTE DES MORTS LAKE is another expansion of the Neenah, immediately below Winnebago rapids; about four and a half miles long, and one mile wide.

These two last lakes (Buttes des Morts, or "Hills of the Dead") are named from hills or mounds said to have been formed of the dead bodies of the Indians slain in some bat-

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tle, which were thrown into heaps and covered with earth. They are now grown over with grass, and present much the same appearance as the ancient mounds so profusely scattered through the West. Should this story prove true, it may be important, as showing the origin of the ancient mounds. These mounds are near the mouth of Wolf river, or about the head of the Great Butte des Morts lake.

RUSH LAKE is situated near the southwest corner of the county (in township seventeen, range fourteen), is five miles long, and about two wide. The southern extremity of the lake crosses the county line of Fond du Lac county. There are no lakes in this county besides those above described.

MARQUETTE COUNTY,

So named in honor of Father Joseph Marquetta, who first explored this part of the country, is bounded on the north by the Neenah river; on the east by Winnebago and Fond du Lac counties, or the east line of range thirteen; on the south by Dodge and Portage counties, or the south line of township fourteen; and on the west by the Neenah river. Its length from east to west is twenty-nine and a half miles, and its average breadth is thirteen and one-sixth miles, showing an area or superficial extent of three hundred and eighty-eight square miles or sections. This county was set off from Brown in 1836, and organized as a separate county in 1844. The population in 1840 was eighteen, and in 1842 was only fifty-nine; but it is now estimated at six hundred. For all judicial purposes it is attached to Fond du Lac county.

In 1840 there were in Marquette county 5 horses, 45 neat cattle, and 20 swine; 100 bushels of oats, 100 of buckwheat, 320 of potatoes, and 20 tons of hay, were the products of the preceding year.

There is a post-office in this county, at Green Lake.

There are three lakes of considerable size in this county, and six of less importance. The principal are

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BUFFALO LAKE, an expansion of the Neenah river, at the northwest angle of the county, commencing nineteen miles below the portage, and extending eleven and one-fourth miles. It is narrow, and the water is shallow, being mostly filled with wild rice.

PUCKAWA LAKE is another expansion of the Neenah river, about seven miles long and two broad, and about forty miles, by the course of the river, below the portage. The village of Marquetta is laid out on the south side of this lake; and a Company has been incorporated to construct a canal from this place to Dekorra, on the Wisconsin river, thus avoiding the portage and much circuitous navigation along the Neenah river.

GREEN LAKE lies immediately east of Puckawa; eight miles long by two broad; its waters deep and very clear. The bottom is covered with white pebbles; and wild rice or other vegetation does not grow upon it, as upon most of the lakes about this portion of Wisconsin.

LITTLE GREEN LAKE lies four miles south of Green lake, one and a half miles long by a mile wide, with a circumference of about seven miles. The water is said to be very deep. "In the middle," says a correspondent of the Green Bay Republican, "it has been sounded to the depth of more than forty feet, and no bottom found: in many places, at a distance of twenty yards from the shore, the water is from eight to twelve feet in depth, and remarkably pure. There is no visible inlet, and but one outlet, which is so inconsiderable that it is in fact only a mere drain. The scenery around is picturesque and beautiful beyond description. On the north side, for more than a mile in extent, the shore is composed of a beautiful white sandstone, rising in some instances perpendicularly to the height of probably seventy-five or eighty feet. This stone possesses all the properties of the best grindstones brought into this Territory; and although some of it can be very readily broken with the hand, yet I struck some parts of the ledge as I passed under

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it with a heavy spear, and I am of opinion that it is firm enough for the best of either grind or scythe stones."

This county is bounded on the west and north by the Neenah, and the only stream besides this, of any importance, is one whose Indian name is

KEESHAYNIC RIVER. It rises in the west part of Fond du Lac county, and running west through the middle of Marquette county, enters the Neenah about a mile above Lake Puckawa. It is about thirty miles in length, and a short distance above the mouth expands into a long narrow lake.

RICHLAND COUNTY

Was established in 1842, on the north side of the Wisconsin river, to embrace two ranges on each side of the fourth principal meridian, and extending to the north line of township twelve. It lies between the counties of Sauk on the east, and Crawford on the west; is twenty-four miles wide, from east to west, and twenty-four and one-fourth miles average length; containing, therefore, five hundred and eighty-two square miles. This county is not yet organized, but is attached to Iowa.

The topography of this county is quite similar to that of the counties south of the Wisconsin; the surface consisting of a series of dividing ridges running between the principal streams, which send out lateral branch ridges, that form bluff banks along the rivers. They are composed chiefly of sandstone.

The population of this county is not supposed to exceed one hundred, and the propriety of its establishment may well be doubted.

There are three streams running through this county, from north to south, of which PINE RIVER is the principal. This stream is navigable for canoes, and is about thirty yards wide at its junction with the Wisconsin. Six miles

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above the mouth, it receives a considerable tributary from the West. There is a cascade about twenty miles above the Wisconsin, where the rocks are said to be united over the water, forming a natural bridge.

The WISCONSIN RIVER is one of the most important in the Territory, especially the lower portion, between the portage and the Mississippi, a distance of one hundred and fourteen miles, by the course of the river. At the portage, it is four hundred yards wide, and it gradually increases in width to the mouth, where it is six hundred yards wide. In Richland county, it has a width of about four hundred and fifty yards. This portion of the river is bordered by high sandstone bluffs, from one hundred and fifty to two hundred feet in height—constituting a scenery of great beauty and even grandeur. The water is shallow, and there are numerous islands and shifting sand bars. The current is usually quite rapid. Hence the navigation of the Wisconsin is rather difficult and uncertain; but steamboats, such as usually run on the Upper Mississippi, have ascended to the portage. When the channel is better known to the pilots, it may, however, be navigated in ordinary stages of the water, without much difficulty.

The distances along the river, from the portage, are as follows:

	Miles.	Total.
From Portage to Dekorra	6	
Thence to Prairie du Sac	20	26
" Arena	12	38
" Helena	10	48
" Mineral creek	7	55
" Pine river	9	64
" Blue river	15	79
" Kickapoo river	19	98
" Ferry (U. S. road)	11	109
" The Mississippi	5	114

The Indian name of this river is Neekoospara.

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SAUK COUNTY

Lies on the north side of the Wisconsin, between Richland and Portage counties, being bounded as follows: beginning on the Wisconsin, on the west line of range three east, and running thence north to the north line of township twelve; thence west six miles; thence north six miles; thence east to the middle of the Wisconsin river; thence down the middle of said river, until it intersects the range line between ranges seven and eight; thence south to the middle of the Wisconsin; thence down that stream to the beginning. It is thirty miles long from east to west, with an average breadth of about twenty-eight miles, and an area of about eight hundred and seventy-six square miles. Sauk county was set off from Crawford, in 1839, and was to be organized as a separate county in 1844. Its population, in 1840, was one hundred and two; in 1842 it was three hundred, and it is now estimated at eleven hundred.

The principal settlement in this county is on the river, at a place called "Prairie du Sac," twenty-five miles northwest from Madison. The prairie is about eight miles wide, and extends eighteen miles along the Wisconsin. Its name is given in allusion to its form, being that of a "sack," or bag, and not from Sauk, the tribe of Indians. The Naumatonan, or Honey creek, enters the Wisconsin a short distance below, upon which mills have been erected. On the Baraboo river, a branch of the Wisconsin, that enters a short distance below the portage, a settlement has been commenced. The remainder of the county is usually represented as very rough and broken, and, to some extent, unfit for cultivation and improvement.

In 1840, one year after the first settlement of this county, it contained 30 horses, 148 neat cattle, and 82 swine; and the produce of 1839 was 464 bushels of wheat, 1,795 of oats, 1,235 of potatoes, and 264 tons of hay. There was one store.

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Some mines of copper ore have been opened in this county, on the Baraboo river, but none of them have proved of much value.

A post-office has been established at Prairie du Sac.

COLUMBIA COUNTY.

This county was established in January, 1846. It begins on the Neenah or Fox river at the north line of township thirteen; thence southward, up said river, to the south line of lands owned by the Menomonee Indians; thence westwardly to the middle of the Wisconsin; thence up that river to the east line of range seven; thence south on said line to the middle of the Wisconsin river; thence down the Wisconsin to the south line of township ten; thence east to the east line of range twelve; thence north to the north line of township thirteen; thence west to the place of beginning. Its area is about seven hundred and twenty square miles. Its population, in 1840, was one thousand six hundred and twenty-three; and in 1842 (excluding officers and soldiers at Fort Winnebago) it was six hundred and forty-six: it is now supposed to be about one thousand. In 1840, it numbered 201 horses, 372 neat cattle, 127 hogs, 9 stores, and 14 saw-mills; and the products of 1839 were, 1,815 bushels of wheat, 1,018 of oats, 21 of buckwheat, 293 of Indian corn, 5,539 of potatoes, 899 tons of hay, and seven thousand one hundred and fifty dollars' worth of skins and furs.

The Winnebago Portage between the Wisconsin and Neenah rivers, near Fort Winnebago, in this county, is a point often mentioned by all who speak or write about Wisconsin. At times of flood, the waters of the Wisconsin occasionally cover the marshy ground at this place, to the depth of three feet; and being at such times the highest, the water passes into the Neenah, thus sending portions of its water to the ocean by two different routes. The "Portage Canal Company" have dug a ditch across the portage, about two feet wide and two feet deep. Capt. Cram re-

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ports, that the length of canal necessary to cross this portage is seven thousand seven hundred and thirty-nine feet; and that the fall from the Wisconsin to the Neenah, in October, 1839, was one foot and fifty-five hundredths. This difference constantly varies, according to the stage of the water in the two streams, but it is believed that it seldom exceeds three feet.

DEKORRA is a village laid out in 1836, by some gentleman from Kentucky, and called "Kentucky City," on the Wisconsin river, at the first convenient place below the portage. There is a store, a flouring-mill, and several houses here; and the principal business done is the lumber trade, this being the point at which lumber from the Upper Wisconsin is landed to supply the surrounding country for many miles in extent. The position of the town is high, commanding, and healthy. The rock about here is sandstone, which has imparted a sandy quality to the soil. The timber is scattered, and consists chiefly of small oaks.

Two other towns have been laid out by different persons in this county, which have not yet risen to much importance. They are Pauquette, twelve miles south of Fort Winnebago; and Ida, or Wisconsinopolis, on the north side of Swan Lake. Near this place is "Stone Quarry Hill," from which an excellent building material is obtained, and affording a commanding view of the surrounding country.

Besides the Wisconsin and Neenah rivers, the Barraboo enters this county nearly opposite Dekorra; and Duck creek, Taynah, and Ockee, are three small tributaries of the Wisconsin from the east.

There are five small lakes in Columbia county, of which the principal are:

SWAN LAKE, an expansion of the Neenah, above the portage, three and a half miles long, and half a mile wide. The water is pure, of great depth, and abounds in fish.

MUD LAKE is also an expansion of the same river, five miles below the portage, about one mile in length.

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LAKE SARAH forms the source of the Neenah, about eight miles west of FOX LAKE.

Post-offices are established at Fort Winnebago and at Columbus, a small village recently commenced, in the south-east part of the county.

PORTAGE COUNTY

Is bounded on the north by the State of Michigan; on the east by Brown; on the south by Marquette, Columbia, and Sauk; and on the west by Crawford and St. Croix counties. It embraces all the country between ranges two and nine inclusive, east of the meridian, and extending from the north boundaries of Marquette, Columbia, and Sauk counties north to the territorial line—being twenty-four miles wide and about eighty miles long. The area is about two thousand square miles. Portage county was set off from Brown in 1836, but not fully organized until 1844. It is now reduced in size by separating the county of Columbia. Its population is probably about one thousand.

The UPPER WISCONSIN lies principally in this county, with its numerous rapids and portages, affording water power of great extent, which is used at many places to manufacture pine lumber. Large quantities of lumber are annually sent down this river, and the Mississippi, as far as St. Louis. The "pineries" commence about eighty miles above Fort Winnebago; and here a railroad has been constructed (the first in Wisconsin) of two miles in length, to convey logs from the forest to the mills. At the "Dells," the river runs for eight miles between perpendicular cliffs of rock about three hundred feet high, and only forty across.

The scenery here is grand and picturesque, resembling the gorge below the Falls of Niagara, and probably produced by the same cause. A small steamboat passed through the Dells, in 1845, being the first attempt to navigate the Upper Wisconsin. Near the Dells is the place where Black Hawk and the Prophet were taken (after their defeat at the battle of the Bad Axe) by Dekorra and

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Chaetar, two Winnebago Indians, who had been employed for that purpose by the Indian agent at Prairie du Chien.

Post-offices have been established at Grand Rapids and at Plover portage, in this county.

The northern part of Portage county contains a great number of small lakes, interspersed with those of larger size; but as no surveys, and but few explorations of any kind have been made, but little is known respecting them. "It may be said," reports Captain Cram, "that there is no direction that can be followed from an assumed point, as a centre, which will not lead into a series of small lakes in this part of the country. These lakes, so beautifully diversified in size, shape, and scenery, are but the limpid springs which form the summit-reservoirs that nature seems to have furnished, with admirable foresight, for a never-failing supply to the Chippewa, the Wisconsin, the Menomonee, the Ontonagon, and several smaller streams, such as the Montreal, the Casp, the Iron, &c. The valleys and ravines, through which the little streams from these lakes meander, are rich, and often present bottoms of considerable width, bearing a luxuriant growth of native grass. The highlands are dry and not very much broken, and are generally covered with pine—white and yellow, and oak occasionally." The elevation of this region above Lake Michigan is about nine hundred and fifty feet.

DANE COUNTY

Is bounded on the north by Sauk and Portage counties; on the east by Dodge and Jefferson; on the south by Rock and Green; and on the west by Iowa: or on the north by the north line of township nine; east by the east line of range twelve; south by the south line of township five; and west by the west line of range six. It is forty-two miles long, from east to west, and thirty miles wide from north to south, with an area of twelve hundred and thirty-five square miles, or sections, thirty-five of which are covered

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by the water of the lakes. This county was set off from the west part of Milwaukee, and east part of Iowa counties, in 1836, but was not organized as a separate county until 1839. Its population, in 1838, was one hundred and seventy-two; in 1840, it was three hundred and fourteen; and at the last enumeration, in 1842, its population was seven hundred and seventy-six. It may now be estimated at about four thousand five hundred. The county seat is at MADISON, the capital of the Territory.

The face of the country, in this large and important central county, is much diversified by hills and valleys; the hills, however, are always of moderate elevation, and have gentle slopes to their summits. The valley occupied by the Four Lakes, and their outlet, is the principal one, and occupies the central portions of the county. There are no considerable portions that can be called timber land, it being almost entirely oak openings or prairie. Some of the eastern portions of the county are occupied by dry ridges, separated by wet meadows, and afford but little inducement for present settlement. The west line of the county passes between the two Blue Mounds, the largest, or principal one, falling within the county of Dane. About three townships, occupying the southwest corner of the county, are within the county known as the "Mineral region," and lead mines have long been worked at the Blue Mound. It touches upon Lake Koshkonong, an expansion of Rock river on the southeast, and upon the Wisconsin river at the northwest, embracing the ground upon which the "battle of the Wisconsin" was fought, between the volunteers under General Henry Dodge, and the Indians under Black Hawk, July 21, 1832. There are three newspapers published in this county, at Madison: and six post-offices have been established—at Madison, Moundville, Cottage Grove, Fitchburg, Dane, and Sun Prairie.

MADISON* is beautifully situated, between the Third and

* Now (1846) an incorporated town.

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Fourth of the Four Lakes, near the centre of a broad valley, surrounded by high lands from which the village may be seen at a great distance, presenting one of the most picturesque views in this part of Wisconsin. It was laid out in 1836, and in December of the same year, it was by law made the permanent seat of Government for the Territory, when the whole town consisted of but one "log cabin." As soon as it was known that the capital of the Territory was established on the point or neck of land between the Third and Fourth Lake, a rush was made to the Land Office at Milwaukee, and all the lands subject to entry in the vicinity, and for many miles around these lakes, were immediately entered, mostly by those who do not intend to occupy them for actual settlement and improvement. Hence the improvement of this county has not been as rapid as some others, where the "speculators" have no opportunity or inducement to monopolize all the most valuable lands. The advantage of having the seat of government, however, has in some degree, made up for this misfortune, and it is probable that Dane county will keep pace with her sister counties, especially as it is probable that the principal public improvements, by canals, railroads, &c., will, as is usual, be made to centre at, or pass through the capital of the Territory. Public buildings have been erected at Madison, for which an appropriation of forty thousand dollars was made by Congress.

In 1840, agreeably to the census of the United States, there were in Dane county, 101 horses, 510 neat cattle, 5 sheep, 628 swine, 3 stores and groceries, 1 saw-mill, 2 cabinet makers, and two lead smelting furnaces. The products of 1839, were 290 bushels of wheat, 10,250 bushels of oats, 12 bushels of buckwheat, 3,080 bushels of Indian corn, 8,480 bushels of potatoes, 10 pounds of wool, 468 tons of hay, 200,000 pounds of lead, and twenty thousand dollars worth of lumber.

The region of the Four Lakes is very favorably known

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as a beautiful country, with a rich limestone soil, and well adapted for agricultural purposes. These lakes lie in a row, from northwest to southeast, the largest being the upper, or most northwesterly, called the Fourth lake. The other three are of nearly equal size, and about equal distances apart. Their outlet, called the Catfish creek, is a valuable stream, affording several fine sites for water power, and might easily be made navigable for small boats. From the report of Capt. Cram, many interesting facts relative to the Catfish and the Four lakes are here given:

"The FIRST LAKE has a circumference of nine and a half miles, and contains five square miles of surface; its longest diameter points due east and west, and is three and one-eighth miles in extent; and the north and south diameter is two miles long. The water is pellucid and has a depth along the boat channel, varying from seven to ten feet, excepting near the outlet, where, as is usual with these lakes, there is a bar, over which the water is but two feet deep. The shores, with but few exceptions, are good; in some places they are rolling and uneven, being broken by bluffs, and interspersed occasionally with small marshes. The timber is scanty, and of inferior quality."

The SECOND LAKE is next above the First. Its length is three and a half miles, and its width nearly two miles. The water is pure, and along the boat track has a depth of nine feet. On the north and east the shore is marshy, with a low, gravelly bank intervening between the marsh and the water's edge; on the southern and western shores, the land is elevated, undulating, presenting high knobs and bluffs.

The THIRD LAKE is intermediate in size, as well as position, between the Second and Fourth lakes, being three and a half miles long, and occupying an area of about six square miles. Its waters are very clear, and about ten feet deep; the banks are high and undulating, bearing a scattered growth of burr oak and white oak trees. Madison is

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on the north shore of this lake, occupying the narrow strip of land between it and the next.

FOURTH LAKE is the uppermost and largest of the Four lakes. It has a periphery of nineteen and one-fourth miles, and covers an area of fifteen and sixty-five hundredths square miles. Its longest diameter bears due east and west, and is six miles in length; and the transverse diameter is four miles long. The water is cold and pure, and of a depth sufficient for all the purposes of navigation by small steamboats—supposed to be from fifty to seventy feet at some places. "The land bordering upon it is hilly, undulating, and in many places broken. On the north side it is well timbered, chiefly with hard wood; and lime, and siliceous stone are found in abundance; the quality thereof, however, has not been sufficiently tested to enable one to form a just estimate of its value for building purposes." This is a beautiful lake, with clean, white, gravelly shores, and is mostly supplied from springs, having only one small tributary. It is fifteen miles from the Wisconsin river, at the nearest point; and it is supposed that a canal might be constructed uniting these waters at Arena, by the valley of the Black Earth creek. The country around the lake rises gradually to a considerable elevation; it is underlaid by limestone. Chalcedony, agates, and carnelians, have been found among the pebbles on the shore of this lake. The surface of the Fourth lake is estimated to be two hundred and ten feet above Lake Michigan, or seven hundred and eighty-eight feet above the level of the ocean; and it is estimated by Capt. Cram to be twenty-two inches higher than Third lake.

There are eight other small lakes in Dana county.—(Twelve in all.) The largest, called WINGRA, lies west of Third lake, and is one and three-fourths miles in length, and three-fourths of a mile wide. The others have not yet been named, and several are quite small.

The CATFISH RIVER, or outlet of the Four lakes, between

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the Fourth and Third lakes, one mile, has a width of from sixty to one hundred feet, and a depth of three feet, except near the Fourth lake, where the width is only thirty-five feet, and the depth two. The descent is estimated at a little less than two feet. Between the Third and Second lakes the descent is but very little; the average width is about three hundred and fifty feet, and the depth varies from one to nine feet; distance, seven-eighths of a mile. Between the Second and First lakes, three and a half miles, there are three slight rapids, having a total descent of about two feet; and the depth of water varies from one to three or four feet. From the First lake to Dunkirk Falls, nine miles, there is but little fall in the river, the water being usually deep, and about one hundred and thirty feet average width. The best method of improving the navigation of this stream would probably be, to build a dam at this point, about six feet high, which would increase sufficiently the depth of the channel, and bring all the lakes to the level of the Fourth lake, thus making a connected navigation for small steamboats through the whole distance, without further expense.

At the Dunkirk Falls there is a rapid, in which the descent is six feet, in a distance of one and one-fourth miles, there being no perpendicular fall. The banks are from fifty to sixty feet high, and the valley is much contracted. From this point to Rock river, twelve miles, there is a constant succession of rapids—one having seven feet and four inches descent in a distance of about one mile. The whole descent on these rapids (twenty-five in all) was ascertained by Capt. Cram to be thirty-four and sixty-eight hundredths feet. The Catfish enters Rock river eleven and a half miles below the foot of Lake Koshkonong. The whole length of the stream, from the head of the Fourth lake, is forty miles, twenty-eight of which could be made navigable by the erection of one dam at Dunkirk, not exceeding six feet in height.

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Koshkonong creek lies chiefly in Dana county, having its source about eight miles northeast from Madison, and running nearly parallel with the Catfish, along the east line of the county, enters Lake Koshkonong (hence its name) in Jefferson county. It receives the waters of two or three small lakes, and its length is about thirty-five miles.

Sugar river takes its rise in the western part of this county, its head branches approaching near those of the Black Earth creek, which runs in an opposite direction from the great dividing ridge, and enters the Wisconsin at Arena, in Iowa county.

Madison is the only village of any size or importance in this county, though a great many others have been laid out, and some of them may hereafter be built up.

The Blue Mounds are two conical hills, or mounds, one in Iowa, and one, the largest, in Dana county, twenty-five miles west of Madison, and twelve miles south from the Wisconsin river. Their elevation is such that they can be seen at a distance of fifteen or twenty miles or more; and in the first explorations of the country they were very important landmarks to guide the traveller in his course through the boundless prairies. The Indian name is Mu-cha-wa-ku-nin, or Smoky Mountains, applied to them, it is said, on account of their summits being usually enveloped in a cloud, or fog. From the summit of these mounds, which are covered with vegetation all the way up, there is a very grand view of the surrounding country, extending far beyond the Wisconsin on the north, and embracing a wide circle on all sides. The Platte Mounds, which are similar in many respects to the Blue Mounds, and may be considered as rivals, are seen at the southwest. Near the Mounds are the remains of a Fort, built during the Black Hawk war, in which several families were protected from the savage foes. The stranger is here shown the grave of Lieutenant Force, who was killed by an Indian hid in the tall grass, in a small ravine, near the place where the grave

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is now seen. This Indian was afterwards killed, near the Four lakes, in a skirmish with General Dodge's volunteers, and a gold watch belonging to Lieutenant Force was taken from the pouch of the Indian, and restored to his family.

The following is a geological section, extending from the summit of the eastern mound to the Wisconsin river, at Helena, as reported by Dr. Locke:

	Feet.
1. Cornitiferous rock, or beds of chert, forming the peak of the Mound,	410
2. Geodiferous lime rock, or lead bearing rock,	169
3. Blue limestone (of Dr. Locke), very thin, or wanting,	00
4. Saccharoid sandstone,	40
5. Alternations of sandstone and limestone,	188
6. Sandstone,	3
7. Lower limestone,	190
Total,	1000

Lead mines have been opened on the southern slope of the principal mound, which afford, in addition to the usual kind of ore, another called "white mineral" by the miners —probably the carbonate of lead. Its external characters are so much unlike the common ore, that its real nature would not be suspected until a more careful examination was made. It is not very abundant, and is seldom worked as an ore, on this account. The smelters give only half as much for this as for the common ore.

Dane County has now adopted the township system of government, and is divided into towns as follows:

ALBION—townships five and six, in range twelve.

DUNKIRK—township five, in range eleven.

ROME—townships five and six in range nine, and township six in range ten.

RUTLAND—township five in range ten.

SUN PRAIRIE—townships eight and nine, in ranges eleven and twelve.

MADISON—embraces all the country not included in the towns above named.

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GREEN COUNTY

Is bounded on the north by Dane, and on the east by Rock counties; on the south by the State of Illinois; and on the west by Iowa county—embracing townships one, two, three and four, in ranges six, seven, eight and nine, east. It is about twenty-four and a half miles long, from north to south, and twenty-four miles wide, with an area of five hundred and eighty-eight square miles. Green county was established from the east part of Iowa, in 1836, and organized as a separate county in 1838. The population was then four hundred and ninety-four; in 1840 it was nine hundred and thirty-three; and in 1842 it had increased to one thousand five hundred and ninety-four. It is now estimated at five thousand.

The surface of the country is much broken by hills of moderate elevation, and gentle slopes, susceptible of cultivation to their summits. The timber usually consists of scattered trees, and the southern portion is mostly prairie.

The "mineral country" extends nearly to the eastern part of this county, where the lead bearing rock crops out, and is succeeded, as we pass eastward, by the underlying sandstone, similar to that found along the Wisconsin. There are already several very valuable "discoveries" of lead in the county, and many flattering "prospects" of more. These mines are nearer Lake Michigan than any other in the mining country, and when the lead trade is diverted in that direction, as much as it must be at some future time, these mines will have the advantage of being nearest to market; and as most of the soil is well adapted for agricultural purposes, this country may be regarded as destined to become one of the most important of the interior counties.

In 1840, there were in Green county 274 horses, 1,459 neat cattle, 608 sheep, 3,605 swine, 2 stores, 1 grist-mill and 3 saw-mills; and the produce of the preceding year was 11,953 bushels of wheat, 85 of barley, 20,245 of oats,

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788 of buckwheat, 25,610 of Indian corn, 15,603 of potatoes, and 1,045 pounds of wool.

Post-offices have been established at Exeter, Monroe, and Decatur.

The county seat is at MONROE, formerly called New Mexico, near the southeast corner of township two, in range seven. It is represented as a very prettily situated and thriving village, and surrounded with a good farming country. Exeter is the name of the place usually known as the "Sugar River Diggings" (township four, in range eight). A considerable quantity of lead is smelted at this place. Centreville, Lexington and Livingston, are towns only in name.

SUGAR RIVER is the principal stream in this country. Rising in Dane, and running through the eastern part of Green, it crosses a corner of Rock county, and passes into Illinois, where it unites with the Pekatonica. It has several branches, of which the one called the Little Sugar river, entering from the west, in township three, is the most considerable. No lead mines have been found east of Sugar river. The Pekatonica crosses the southwest corner township of Green county, and there receives a small tributary, called Skinner's creek

There are no lakes in Green county.

IOWA COUNTY,

One of the largest and most important of the counties in the mineral district, is bounded on the north by the Wisconsin river, which separates it from Richland and Sauk; on the east by Dane and Green counties; on the south by Illinois; and on the west by Grant county. It may be described as embracing all of ranges one, two, three, four and five, east of the fourth principal meridian, lying between the State of Illinois and the Wisconsin river. Iowa county was established by the Legislature of Michigan, to include all that part of Crawford county lying south of the Wiscon-

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sin river, and was reduced to its present dimensions in 1836. It is thirty miles wide from east to west, and has an average length of forty-six and a half miles, and an area of thirteen hundred and ninety-five square miles.

Iowa county is soon to be divided by a line running east and west through the middle of township four, should the people decide by a vote, to be taken on the question, in favor of such division. The northern division is to be called Montgomery, and the southern La Fayette, thus dropping entirely the original name of the county.

In 1830, Iowa county had a population of one thousand five hundred and eighty-nine; and in 1836, of five thousand four hundred and thirty-four. In 1838, excluding Grant county, &c., the population was three thousand two hundred and eighteen; in 1840, it had increased to three thousand nine hundred and seventy-eight; and in 1842, to five thousand and twenty-nine. It is now estimated at almost ten thousand.

The general surface is much broken by valleys, with intermediate ridges, the whole having a slight inclination in a north and south direction from the great ridge, running east and west a few miles south of the Wisconsin. This broken character is owing to the loose, soft, easily decomposed limestone, which is readily carried away by the disintegrating agents. North of the main ridge the limestone is succeeded by the underlying sandstone, forming cliffs of a wild and picturesque appearance. This dividing ridge is a very prominent and important feature in the topography of the western counties. Unlike most of the dividing ridges, it is very high, commanding a fine view of the valleys descending from it. The main road passes along the summit of the ridge, and it is supposed that, should a railroad ever be constructed to unite this country with Lake Michigan, it will be along this ridge.

In 1840, the United States census shows that there were in this county 30 smelting furnaces, producing eight mil-

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lions nine hundred and nine thousand pounds of lead within the preceding year, giving employment to one hundred and twenty-eight men, and requiring an invested capital of one hundred and six thousand five hundred dollars. There were then in Iowa county 1,132 horses and mules, 4,567 neat cattle, 583 sheep, 7,618 swine, 21 stores and groceries, 1 distillery, 2 breweries, 1 printing office, 4 grist-mills and 7 saw-mills. The products of 1839 were as follows: 12,945 bushels of wheat, 2,424 of barley, 147,782 of oats, 145 of buckwheat, 76,885 of Indian corn, and 49,383 of potatoes, 4,152 tons of hay, 398 pounds of wool, and 35 of wax. These statistics show the truth of the remark made on a preceding page, that the mining country is also a good farming country; for it will be seen that while Iowa county produces the greatest amount of lead and copper, she at the same time produces the greatest quantity of oats; and the other agricultural products do not indicate a barren and unproductive soil. But the disposition of those who reside here to dig for wealth under the soil, rather than on its surface, is so strong, that the capabilities of the soil are probably not yet fairly tested.

There are fifteen post-offices established in this county, viz: at Belmont, Diamond Grove, Dodgeville, Elk Grove Gratiot's Grove, Helena, Mineral Point, Porter's Grove, (or Ridgeway), White Oak Springs, Willow Springs, Wala, Collonwood Hill, New Diggings, Pedlar's Creek, and Savannah. This list will show also the principal villages and settlements in the county.

Belmont is situated between the two Platte Mounds near the north line of township three, in range one east, and is noted as being the place selected, in 1836, by Governor Dodge, for holding the first session of the Legislative Assembly. It has not improved very rapidly since that period. The Platte Mounds are two conical elevations, about two hundred feet high, twelve miles southwest of Mineral Point. They are three miles apart, and there is a small

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mound lying between them. They are composed of siliceous limestone, like the other mounds in this region, and are visible, when the air is clear, about thirty miles. The Indian name is Eu-ne-she-te-no—the "two mountains."

The view from the top of these mounds is very interesting, and is graphically described by Gen. Wm. R. Smith as follows: "An ocean of prairie surrounds the gazer, whose vision is not limited to less than thirty or forty miles. This great sea of verdure is interspersed with delightfully varying undulations, like the vast waves of the ocean, and every here and there sinking into the hollows, or cresting the swells, appear spots of wood, large groves, extensive ranges of timber, small groups of trees, as if planted by the hand of art, for ornamenting this naturally splendid scene. Over this extended view, in all directions, are scattered the incipient farms of the settlers, with their luxuriant crops of wheat and oats, whose yellow sheaves, already cut, form a beautiful contrast with the waving green of the Indian corn, and the smooth, dark lines of the potatoe crop. Throughout the prairie, the most gorgeous variety of flowers are seen rising above the thickly set grass, which in large and small patches has here and there been mowed for hay, all presenting a curiously chequered appearance of the table beneath us. The mineral flower, the tall, bright purple and red feather, the sun-flower, the yellow bloom, the golden rod, the several small and beautiful flowers, interspersed with the grass, render the scene indescribably beautiful. To the north, the Wisconsin hills are seen bounding the view; to the east, prairie and wood are only limited by the horizon, and the Blue Mounds, on the northeast, form a back ground and a land mark; to the south, the view over the rolling country extends into the State of Illinois; in the southwest, is seen the Sinsiniwa Mound; the view to the west is only bounded by the Table Mound, and the hills west of the Mississippi, and distant about thirty miles; while to the northwest the high hills through which the Father of

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Waters breaks his sweeping way, close the view. Below us, on the plain, is the little village of Belmont, with its bright, painted dwellings; the brown lines in the broad green carpet indicate the roads and tracks over the prairie; the grazing cattle are scattered over the wide surface looking like dogs, or sheep, in size; while in the distance are seen waggons of emigrants, and ox teams hauling lead, merchandize and lumber; the horseman and foot traveller are passing and re-passing; pleasure and travelling carriages are whirling rapidly over the sward, as if the country had been improved for a century past, instead of having been only five years reclaimed from the savages. This picture is not exaggerated—it fails of the original beauty, in the attempt to describe that scene which is worth a journey of a thousand miles to contemplate in the calm sunset of a summer day, as I have viewed it, from the top of the Platte Mounds."

Beside the Platte Mounds, the Western Blue Mound falls within this county.

HELENA is situated on the Wisconsin river, near the mouth of Pipe creek, seven miles below Arena, fifteen miles from Dodgeville, and about the same from the Blue Mounds. The most important business done at this place is the manufacture of shot, by the "Wisconsin Shot Company"—the only place in Wisconsin where shot is manufactured.

The view of the valley of the Wisconsin from the top of the shot tower at this place is described as very fine, extending a great distance. The river is seen winding through the rich, flat valley, which is bordered on both sides by high hills, with here and there rocky cliffs, separated by well wooded coves or vales. Besides the operations at the shot tower, there is much other business done at Helena, in the shipment of pig lead, and the receipt of lumber from the Upper Wisconsin, to supply the surrounding country.

A few miles below Helena, on the Wisconsin, is a place

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called the Fallen Rocks, where the river has undermined the strata, and a mass of sandstone about thirty feet high, and two hundred feet long, has fallen off from the body of the cliff.

ARENA is situated on the Wisconsin river, the northeast angle of the county, at the mouth of the Black Earth creek.

DODGEVILLE is a thriving little village, six miles north of Mineral Point, named in honor of General Dodge, first Governor of Wisconsin. Several lead mines have been opened, and furnaces are in operation in the village; and the mineral diggings in the neighborhood are numerous and valuable, and are among the first that were discovered and worked in the country. A company was incorporated in 1836, to construct a railroad from the Mississippi to Belmont, with the privilege of extending it to Dodgeville; but nothing has been done towards constructing the road.

MINERAL POINT is so named because it is situated on a point of land between two small branches of the Pekatonica, containing mineral, or lead ore. Besides lead—copper, zinc and iron are found here in great quantities. It is the seat of government for Iowa county, and is rapidly improving in population and wealth, as is evinced by the number of new and permanent dwellings erected recently. The quantity of lead and copper sent from here is very considerable; most of it finds its way to Galena, in Illinois, whence it is shipped down the Mississippi, and by way of the ocean to New York. Within the last few years, however, much of it is sent by waggons to Lake Michigan, mostly at Milwaukee, and hence sent direct by way of the lakes to New York. The experiment has been tried of boating lead down the Pekaonica, and up Rock river to Beloit, whence it was sent to Southport; and a company has been incorporated to improve the navigation of the Pekatonica, with a view of securing this trade on that route; but nothing has yet been done towards accomplish-

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ing this object. A company has also been incorporated to construct a railroad from Mineral Point to the Mississippi. The town was incorporated in 1844.

The amount received at the land office at Mineral Point for the last few years is as follows.

In 1840	$9,398 73
1842	7,743 28
1843	10,692 27
1844	33,634 18
1845	55,547 07

Several other towns have at different times been laid out in Iowa county. Among them are Albion, New Baltimore, Buchanan, Otterborne, Muskado, Savannah and Shutsburgh —which have not grown to be towns of much size and importance.

There are no lakes or marshes in Iowa county.

The PEKATONICA is the principal stream, rising a few miles west of Mineral Point, and running in a southeasterly direction through the southeast corner of Green county, passes into Illinois, where it makes a long bend to the south, and enters Rock river five and a half miles below the State Line. It is a sluggish stream, remarkable for the great number of short bends or crooks, running through a beautiful and romantic valley, bordered by high bluffs. The water is usually turbid, hence its name, which signifies "the muddy stream." It is navigable for small boats from its mouth to the "Forks," at the village of Wiota. The principal branch, or tributary of the Pekatonica, is called the East Branch, and rises along the ridge between Dodgeville and the Blue Mounds. It runs south, through the eastern part of the county. The other tributaries are Spafford's Creek, Wolf Creek, Big and Little Otter Creeks, and Bonner's Creek. It was on the Pekatonica that one of the first battles was fought with the Indians during the Black Hawk war, June 17, 1832.

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Fever river rises near Belmont, in this county, and running south enters the Mississippi seven miles below Galena, the great depôt of the lead trade of this region. The river was named after a Frenchman (La Fever) and not on account of the prevalence of fevers in its vicinity. The Indian name, Mecobea (Small Pox river) is equally unfortunate for the reputation of this stream for healthfulness.

Mineral creek, and Pipe creek, are two small tributaries of the Wisconsin, in this county. They have an unusual number of small branches, a fact which seems to be common in the sandstone district.

GRANT COUNTY

Occupies the southwest corner of Wisconsin, being bounded on the north by the Wisconsin river (or Crawford and Richland counties); on the east by Iowa county; on the south by the Mississippi, which separates it from the Territory of Iowa. Its extreme length, from north to south, is forty-eight miles, and from east to west, thirty-seven miles; its mean breadth, however, is only twenty-four miles, showing an area of eleven hundred and fifty-two square miles. It has a river coast along the Wisconsin and Mississippi of nearly one hundred miles.

Grant county was set off from Iowa and organized as a separate county in 1836. In 1838, it had a population of two thousand seven hundred and sixty-three; in 1840, of three thousand nine hundred and twenty-six; and in 1842, of five thousand nine hundred and thirty-seven. It is now supposed to be about ten thousand. The county seat is at Lancaster.

The topography of this county is quite simple; it may be described as a series of ridges, with intervening valleys. The main ridge runs east and west, commencing at the mouth of the Wisconsin, and running east along the south part of township six, quite through the county; from this

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main ridge lateral branches extend south between the valleys of the streams, and these again have smaller spurs extending east and west. North of the main ridge, the system is not so uniform, and sandstone bluffs occur. The ridges are composed of limestone rock, full of fissures, usually running north and south, or east and west; and these fissures are abundantly supplied with ores of lead and zinc, and occasionally copper. From the mines large fortunes have been realized by miners, smelters, merchants, and speculators—and large fortunes have also been sunk in these limestone fissures.

These mines are usually known as "The Diggings," and are distinguished by some trivial name. Thus we hear of the

	Section.	Township.	Range.
Beetown Diggings	17	4	4 west
Blue River Diggings	24	6	1 "
Fair Play Diggings	25	1	1 "
Grant Diggings	15	4	4 "
New Grant Diggings	8, 17 & 18	4	4 "
Hardscrabble Diggings	13, 24 & 25	1	1 "
	and 18, 19 & 30	1	1 east
Kilbourn Diggings	12	1	1 west
Menomonee Diggings	1, 6, 31 & 86	1 & 2	1 & 2 "
Nip and Tuck Diggings	30	4	4 "
Patch Diggings	10	2	1 "
Rattlesnake Diggings	31 & 36	4	4 & 5 "

This list embraces but a small proportion of the whole number of "Diggings" in the county; indeed, the southern portion of this county may be considered as one great lead mine, and the number of openings, or "sucker holes," is so great that it is dangerous to travel through the country unless with extreme caution, for fear of falling into them.

Grant county is represented as being better supplied with timber than any other portions of the mineral country, and it has many fine prairies, abounding in springs of pure water. There is neither swamp, lake, nor stagnant pool of water of

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any kind in the county. The soil in both timber and prairie land is very rich and fertile, yielding all the usual crops (as will be seen by the following statistics), and with comparatively little labor to the farmer. Among the timber are found oak, walnut, hickory, lynn, or basswood, sugar maple, cherry, ash, iron-wood, quaken-aspen; and grapes, wild plums, and crab apples, grow in some parts of the county, in abundance. On the river bottoms there are also found the soft maple, elm, and birch; on the bluffs, the cedar and white pine. The woods abound in game, and the streams in fish.

The census of 1840 shows that there were then 17 furnaces in this county, producing annually six millions twenty thousand three hundred and fifty pounds of lead, and giving employment to eighty-six men. There were 5,735 horses and mules, 4,197 neat cattle, 463 sheep, 8,645 swine, 33 stores and groceries, 2 lumber yards, 1 brewery, 2 flouring mills, 3 grist-mills and 11 saw-mills. The products were 10,796 bushels of wheat, 3,246 of barley, 65,400 of oats, 13 of rye, 1,059 of buckwheat, 100,055 of Indian corn, and 74,629 of potatoes; 3,912 tons of hay, 100 pounds of tobacco, 1,355 pounds of maple sugar, 63,657 pounds of soap, and 8,742 pounds of tallow candles.

Post-offices have been established at Cassville, English Prairie, Fair Play, Hazel Green (Hardscrabble Diggings), Hurricane, Jamestown (Menomonee Diggings), Lancaster, Paris, Patch Grove, Plattville, Potosi, Sinsinawa, and Wingville.

Cassville is situated on the Mississippi river, in section twenty-six, in township three north, and range five west. It was commenced as early as 1835, but very little permanent improvement was made until within the past one or two years. The scenery about here is represented as very beautiful.

Potosi is considered by many as the most important place on the Mississippi in the mineral country, and destined

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ere long to be the shipping point for much of the lead trade that finds its way down that river. It consists of the towns of Lafayette, Van Buren, and Dublin, united, and it is situated at the mouth of Grant river, in a romantic and picturesque valley, with a stream of pure water running through it. This valley, sometimes called Snake Hollow, is three miles long, and varies from one hundred to three hundred yards in width. Improvements were commenced here in 1836; and this is the point usually considered as the most proper for the termination of a railroad from Lake Michigan.

This town is now incorporated; and efforts are making to improve the channel which connects it with the Mississippi. A grant of one section of land was made by Congress, in 1844, for this purpose.

SINIPEE on section six, township one, range two west, is also spoken of as destined to become an important point for the shipment of lead. The town stands on the edge of the water, which is deep near shore, affording a convenient landing for the largest steamboats.

PLATTEVILLE is the largest of the interior towns, situated on section fifteen, in township three, range one west, in the immediate vicinity of some extensive mineral diggings. It is five miles west from Belmont, on a small branch of the Little Platte river. The village was incorporated in 1841. It has an academy, which was incorporated in 1839.

LANCASTER, the seat of justice, is also a flourishing town, situated on section three, in township four north, and range three west, being near the centre of the county. It has a court-house of brick, and there is here a newspaper, published weekly.

WINGVILLE is situated on the main ridge road, near the line between the counties of Grant and Iowa, forty miles from Prairie du Chien. The Blue River Diggings are at this point. Limestone is found, and also a stone suitable for building, and easily dressed.

Some other towns in this county are perhaps deserving

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of notice, and some are mere "paper towns," as Brooklyn, New Cincinnati, Gibraltar, Grant, Hudson, Osceola, Sutherland and Van Buren (or Blue river).

The large prairie lying in range five west, is usually called BLAKE'S PRAIRIE; and the long narrow one, extending from Lancaster nearly to Potosi, is called BOIS PRAIRIE. ENGLISH PRAIRIE lies at the northeast corner of the county, extending into Iowa.

PLATTE RIVER (Moschoca, "always full," of the Indians,) is the largest stream within the county, running principally in range two west, and entering the Mississippi two miles above Sinipee. It is said to be navigable for steamboats for six miles. Its tributaries are Little Platte, French creek, Huglan's creek, and Block House creek.

GRANT RIVER is said to be navigable twelve miles above its mouth, at Potosi. It has numerous small branches, among which are Bois Creek, Pigeon creek, and Rattlesnake creek.

BLUE RIVER is a stream about twenty miles in length, in the northeast part of the county, tributary to the Wisconsin. Near its sources are some valuable mines of lead and copper, known as the "Blue River Diggings."

SINSINIWA CREEK runs south, through township one, range one west, and is a tributary of Fever river, in Illinois. The Sinsiniwa Mound, from which this creek derives its name, is one of those isolated, conical elevations so remarkable in this country, situated near the State line, five miles from the Mississippi. The Menomonee creek runs between this mound and the river.

CRAWFORD COUNTY,

One of the oldest in the Territory, is now reduced to within the following boundaries: begin at the mouth of Buffalo river, on the Mississippi, thence up the main branch of Buffalo river to its source, thence along the dividing ridge between the waters of Chippewa and Black rivers

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until it reaches the head waters of Black river, thence east to the boundary of Portage county, being the line between ranges one and two east, thence south to Richland county; thence west and south by the boundaries of that county, to the Wisconsin river; thence down the Wisconsin and up the Mississippi, to the place of beginning. But a very small portion of this county has been surveyed, and consequently but little can be known of the exact course of the streams, or position and the extent of the lakes.

Crawford county was first established by the Legislature of Michigan, October 16, 1818, and then included all the country west of a line drawn north and south through the middle of Wisconsin portage. As now limited, its area is supposed to be about seven thousand square miles. The population, in 1830, was six hundred and ninety-two; in 1836, it was eight hundred and fifty-four; in 1838, it was one thousand two hundred and twenty; in 1840, it was one thousand five hundred and two; and in 1842 (omitting officers and soldiers at Fort Crawford) it was one thousand four hundred and forty-nine. It is now estimated at three thousand.

In 1840, there were 366 horses, 808 neat cattle, 666 swine, 2 lumber yards, 1 grist-mill and five saw-mills. The crops raised were 2,092 bushels of wheat, 32 of barley, 9,299 of oats, 497 of rye, 104 of buckwheat, 5,257 of Indian corn, 7,522 of potatoes, 553 tons of hay, and twenty-seven thousand eight hundred dollars worth of skins and furs.

The south part of Crawford county consists of a ridge running north and south, on which the waters of the Mississippi and Upper Wisconsin take their rise. For a distance of eighty or a hundred miles, this ridge is not broken by any valley. The bluffs along the Mississippi appear to be the termini of lateral spurs of this ridge, extending down between the smaller streams. Near the falls of Black riv-

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er, are the Iron Mountains, (see page 83 of this work) and other high points. "The scenery from these high ridges," says Mr. Bronson, "is the most picturesque imaginable: natural columns, pillars, towers, mounds, &c., are frequently seen, varying in height from twenty to one hundred feet; their summits oval, spiral, or inclined, and with more or less perpendicular sides. They show the lime, sand, and quartz formations with which the whole country abounds." Excellent materials for mill-stones are found here. On the Kickapoo river, these naked knobs often assume shapes resembling, rudely, the figure of some animal, or ghost, and are held in great veneration by the Indians.

This portion of the county it is supposed may prove valuable as a mining district, many indications of the existence of veins of copper having been recently discovered.

The northern portion of the county is more level, abounding in lakes and streams, more or less filled with wild rice.

Prairie du Chien, the seat of justice of the county, and the only village of much size and importance in it, is situated on the Mississippi, about four or five miles above the mouth of the Wisconsin, on a level plain or prairie, about six miles long and two miles wide. This prairie is bordered on one side by the Mississippi, and on the other by high rocky bluffs, with scattered trees. The name was given from an Indian, who formerly resided here, called "the Dog." It is one of the oldest of the French settlements, or trading posts; but the first permanent settlement was commenced in 1783. Fort Crawford is located here, near the south part of the "new town" of St. Friole, as it is sometimes called, to distinguish it from the more ancient or "old town," which lies a mile and a half above, and is separated from it by an arm of the Mississippi called the "Grand Maris de St. Friole." Below the fort, the "City of Prairie du Chien" has been laid out, but the *city* is much smaller than the town. Prairie du Chien is about five hundred and forty miles above St. Louis.

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The principal rivers in Crawford county are

BAD AXE, which heads about forty miles from Prairie du Chien, and runs into the Mississippi. This stream is rendered memorable by the fact that the last, and decisive battle with Black Hawk and his band, took place at its mouth, on the 2d day of August, 1832.

BALL RIVER is another tributary of the Mississippi, a few miles below Black river, at a beautiful prairie called "Prairie du Crosse," which was once much frequented by the Indians for the purpose of playing at a favorite game with a ball—hence the name Ball river. The Indian name is Wazioju.

BLACK RIVER (Sappah of the Indians) is an important tributary of the Mississippi, entering between Ball and Chippewa rivers. It is about two hundred yards wide at the mouth, and maintains this width for fifty miles, to the "falls." At these falls, there is a descent of twenty-two feet in a distance of about one hundred yards, affording water power at which about three millions of feet of lumber are annually made; and being at the head of navigation, is supposed to be an important place. Improvements were begun here in 1840.

KICKAPOO RIVER is a branch of the Wisconsin, which runs for some distance nearly parallel with the Mississippi, and enters the Wisconsin in range four west. About its sources forests of pine are found.

TREMPALEAU RIVER, a branch of the Mississippi that enters near Mount Trempaleau or the "Montagne qui treupe dans l'eau" (Soaking Mountain) of the French. This remarkable bluff is about five hundred feet high, affording a beautiful and extensive view of the Mississippi and the surrounding country. A very fine engraving of this mountain and the tranquil scenery around it was made a few years since to accompany the "New York Mirror."

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CHIPPEWA COUNTY.

This county was established in 1845, from the western and northern parts of Crawford, and is bounded as follows: begin on the Mississippi at the mouth of Buffalo river, thence up Buffalo river to its source, thence along the dividing ridge between the waters of Black and Chippewa rivers to the head of Black river, thence east to the line of Portage county, thence north to the State line of Michigan, thence westwardly to the Forks of the Montreal river, thence up the West Fork to the point nearest to the Lac Courtorielle, thence by the canoe route to Long Lake, thence down the Red Cedar river to the mouth of the Meadow Fork, thence to the Lower Forks of the Porcupine river, thence down that river and the Mississippi to the place of beginning. In superficial extent, this county is estimated at about nine thousand square miles. It embraces the basin of the Chippewa river, one of the largest tributaries of the Mississippi in Wisconsin. Its population is estimated at eight hundred.

The Chippewa river (Ojibwa, of the Indians) runs entirely across the Territory, having its rise in the State of Michigan, near the sources of the Wisconsin, Montreal, &c., and running into the Mississippi near the foot of Lake Pepin. It is about five hundred yards wide at its mouth. There are six rapids on the Chippewa. The principal one called the "Falls," is about seventy-five miles above the mouth, and has a descent of twenty-four feet in the distance of half a mile. A very large amount of pine lumber is annually sent down this river. Towards the sources of this stream and its branches there are many fine lakes, some of which have received names and are known by them. The principal are Lac Courtorielle, Lac Chetac, Lac de Flambeau, Tomahawk Lake, Red Cedar Lake, Rice Lake, &c., &c. The Red Cedar Fork is the main branch of this river, entering from the west about thirty-six miles above its mouth. About sixty miles below Rice Lake, on this river,

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according to Schoolcraft, commences a series of rapids over horizontal layers of sandstone rocks, which extend, with short intervals, down the river twenty-four miles. The remainder of the distance (about fifty miles) to the junction, is characterized by deep water, with a strong current; and at the junction is commanding and elevated, affording a fine view of a noble expanse of waters. The Eau Gallais is another branch of the Chippewa, entering from the west, eighteen miles above the mouth, on which mills have been built.

Porcupine River enters Lake Pepin near the middle.

SAINT CROIX COUNTY.

This county was reduced very materially in size by setting off from it, in 1845, the county of La Pointe. It is bounded by the following line:—begin on Lake Pepin at the mouth of the Porcupine river, running up that river to the First Forks, thence to the mouth of the Meadow Fork of Red Cedar river, thence up that river to Long Lake, thence by the nearest canoe route to Lac Courtorielle, thence to Yellow lake, thence to the mouth of Muddy river, thence down the Mississippi to the place of beginning. Area about eleven thousand square miles.

A law passed in 1845 to organize this county distinct from Crawford, provided the people should by a vote decide in favor of the measure; but no vote having been taken as required by law, the county remains attached to Crawford. The population of this region, in 1840, was eight hundred and nine; and in 1842, it was estimated at twelve hundred—the settlements being so remote and so little known that it was found impracticable to make an exact enumeration. It is now, after the separation of La Pointe county, supposed to contain about fifteen hundred inhabitants.

The principal settlements are at La Pointe, on Lake Superior, and on the St. Croix river.

The census of 1840 shows that there were then 58

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horses, 434 neat cattle, 6 sheep, 187 swine, 7 stores and groceries, 3 saw-mills, and 9 cabinet makers in this county; and the products of the preceding year were 74 bushels of wheat; 79 of barley, 258 of oats, 606 of corn, 8,014 of potatoes, 447 tons of hay, 17,997 pounds of maple sugar, 4,282 barrels of fish, 1,500 gallons of fish oil, and four thousand three hundred dollars worth of skins and furs.

Much of this county will remain as it is at present, an uninviting region, but there are portions of it, especially along the Mississippi, and its branches, that may be cultivated to advantage; and its forests of pine, and perhaps mines of copper, may in some degree compensate for its deficiencies otherwise.

Many of the rivers, lakes, &c., in this portion of the Territory, have received different names by the persons who have visited or described them, and hence there is some confusion in relation to these names. Those that appear to be pretty well established are as follows:

St. Croix river, an important tributary of the Mississippi, a few miles above Lake Pepin, and fifty miles below the Falls of St. Anthony. Its length is about two hundred miles. It originates in Upper St. Croix lake, a beautiful sheet of clear, deep water, twelve miles long from north to south, and from one to three miles broad, with a small island near the south end. From this lake there is a portage of two miles, over a dry pine ridge, to the head of the Bois Brule river of Lake Superior. The branches of the St. Croix connect, by short portages, with the Chippewa, the Ishkodewabo (or Rum), and the Mauvaise rivers. At the Falls of the St. Croix, greenstone rock is found. Mills have been erected here, and some other improvements commenced. The quantity of pine lumber manufactured on the St. Croix is estimated at five millions of feet annually. Above the Falls the river is full of rapids and falls; the descent from the portage at its source to the mouth being two hundred and twenty-seven feet, as ascertained by Mr Nicollet.

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The St. Croix is about one hundred yards wide, at its mouth, which is opposite an island in the Mississippi; and on the right bank at the mouth, there is a perpendicular ledge of sandstone about ten feet high. A few hundred yards above the mouth commences the Lower St. Clair lake, which extends thirty-six miles, with a breadth of about three or four miles.

Rum River (Ishkode-wabo, or Missisagaregon, of the Indians) is the most important tributary of the Mississippi river in Wisconsin, above St. Croix, entering fourteen miles above the Falls of St. Anthony. It is sixty yards wide at its mouth, and navigable for canoes about one hundred and fifty miles. It rises near the St. Louis river of Lake Superior, and passes through Spirit lake, a sheet of water twelve miles long and four wide, containing several islands. The water is transparent, and like most of the Lakes in Wisconsin, abounds in fish. The Mille Lac forms the source of a considerable branch of Rum river, by which the navigation is connected, by a portage of one mile, with the Upper Mississippi. This lake, or rather group of lakes, is about twenty miles in diameter.

Saint Francis river (Wicha-niva, of the Indians) enters a short distance above Rum river. It runs nearly parallel with the Mississippi, and hence it has been called the Parallel river; and as it has one of its sources in Leaf lake, it has also been called Leaf river. It is navigable for canoes about one hundred miles. It was named by Hennepin, who saw it in 1680.

The minor streams in this county tributary to the Mississippi are Nokays, Pekushino, Pidewabie or Little Rock river, Peterah, Ottonway or Raccoon, Clear Water and Porcupine. Those tributary to the St. Croix are, Willow, Greenstone, Altauwa, Nemokago, Red Cedar Creek, Reed Creek, Snake river, Wigobimis, Kettle, Shell, and Yellow rivers.

The lakes that have received names may be enumerated

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as follows: Middle Lacs, Red Cedar Lake, Rum Lake, Green, Bear's, Pekagomag, Upper St. Croix, Lower St. Croix, Shell, Wigabimis, Yellow, Kino, Makwa, Long, Birch, and Pine Lakes.

Post-offices have been established in this county at Lake St. Croix, Falls of St. Croix, and Kaposia.

LA POINTE COUNTY.

This is a new county, having been established in 1845 from the north part of St. Croix, and embraces all the Territory north of a line extending from the Mississippi at the mouth of Muddy river, to Yellow Lake, thence to Lac Courtorielle and thence to the west branch of the Montreal river. La Pointe on Madeline Island in Lake Superior is the county seat. The county extends to the source of the Mississippi, and north to the Lake of the Woods. The settlement at La Pointe is the oldest in the Territory, older even than Green Bay. The population is estimated at about fifteen hundred, and its area cannot be less than twenty-five thousand square miles.

From the geological character of some portions of this county it is supposed that mines of copper and silver may yet be found similar to those now known to exist further East, within the "upper Peninsula" of Michigan.

Post-offices have been established at La Pointe, and at Sandy Lake. Important trading posts have been established for many years in various parts of the county, at which furs are purchased of the Indian tribes.

The dividing ridge between the waters of Lake Superior and those of the Mississippi lies principally in this county, extending from the source of the Montreal in a direction nearly parallel with the lake coast, around to the "Height of Land" near the source of Pigeon river. It is supposed to have its greatest depression near the source of the St. Croix and Bois Brule rivers, where it is only three hundred and sixty feet above Lake Superior. From this

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point it increases in height to eight hundred and four feet at the Montreal, and seven hundred and thirty eight feet at the Savannah portage. Beyond this latter point it is so high as to deserve the name of mountain, being estimated at from twelve to fifteen hundred feet above Lake Superior.

The principal rivers are the Upper Mississippi, Rainy Lake river, the St. Louis river, the Bois Brule (or Burnt Wood), the Mauvais, and the Montreal rivers.

Rainy Lake river is about one hundred miles long, rapid but navigable, and about four hundred yards in width at its mouth. Through this stream the waters of Rainy Lake pass to the Lake of the Woods; and from thence they flow to Hudson's Bay at the north. Its tributaries (in Wisconsin) are the Namakan, Vermillion, Little Fork, Big Fork, Black, and Baudett rivers.

The SAINT LOUIS RIVER is the largest and most important tributary of Lake Superior in this Territory. It enters at the western extremity of the lake, or of Fond du Lac bay; is a very crooked stream, full of rapids and falls, but is much used by travellers in passing from Lake Superior to the Upper Mississippi. At the mouth it is about one hundred and fifty yards wide, and immediately above the mouth it expands into a long narrow lake.

The BOIS BRULE (or Burnt Wood) RIVER enters the lake twenty miles from Fond du Lac, and is about ninety-four miles long, and navigable for canoes about eighty miles. It has its source in a spring of very clear and cold water; twenty yards across, and situated near the upper St. Croix lake.

The MAUVAISE (bad) RIVER, of the French—the MUSHKEE (swamp) river, of the Indians, is the next considerable tributary of Lake Superior east of the Bois Brule, entering about half-way between La Pointe and the mouth of the Montreal, at a place where the shore of the lake is sandy for several miles each way—an unusual thing on the coast of this lake.

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The MONTREAL RIVER does not appear, from the recent surveys, to be so large and important a stream as has been supposed. It heads some considerable distance west of the Lac VieuxDesert (Lake Katakittekon), is full of rapids and falls, especially towards its mouth, and is scarcely navigable for canoes. About eighty yards from the mouth, or entrance into the Montreal bay, there is a rapid with a descent of some eighty or ninety feet.

The numerous other streams in this county are but little known. The same may be said of the small lakes profusely scattered over the county.

Fond du Lac at the western extremity of Lake Superior, must not be confounded with the other place of the same name at the south end of Lake Winnebago.

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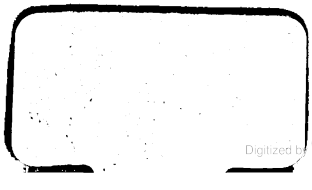

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